

# Public Health Workforce



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# Public Health Workforce Study

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## **EXECUTIVE SUMMARY**

### **Background**

An adequate supply of well-prepared public health professionals is essential to an effective public health system in America. Concerns about bio-terrorism and terrorist attacks as well as the outbreak of Sudden Acute Respiratory Syndrome (SARS) have made the country more acutely aware of the important responsibilities of the Nation's public health system. At the same time, there is concern about the adequacy of the public health workforce, both in terms of the number of workers and their skills and competencies.

Over the past decade, a number of significant studies of the public health workforce were conducted<sup>1</sup>, designed to help the health community better understand the composition of the workforce, its availability, its functions and the adequacy of its preparation to carry out required duties. However, these efforts have been complicated by the fact that the public health workforce is not easily defined or measured. It is a very diverse workforce, found in many settings and providing a wide range of services. Public health workers are not generally licensed which would facilitate counting and studying this workforce. Responsibilities are shared between public agencies, voluntary hospitals and others in the health sector. In addition, within the public sector, responsibility is shared between different levels of government and several agencies. There are also major State-by-State variations in responsibility among State and local government and private groups, compounding the difficulty of counting and tracking the public health workforce. Additionally, functions and responsibilities can vary within a State between rural and urban locations.

The National Center for Health Workforce Analysis of the Bureau of Health Professions in the Health Research and Services Administration commissioned the New York Center for Health Workforce Studies at the SUNY School of Public Health to conduct a study of the public health workforce. The study focused on workers in State and local governmental public health agencies, particularly public health physicians, dentists and nurses, as well as other workers with formal public health training. The study also examined the role that schools of public health play in assisting these public health agencies to recruit, retain or provide continuing education to their workforce. Major goals of this study included:

- assessing the adequacy of the supply of these public health workers in relation to the demand for them;

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<sup>1</sup> e.g. NACCHO, 1995; Richardson, Casey, & Rosenblatt, 1999; Rosenblatt, Casey, & Richardson, 2001; Turnock & Hutchinson, 2000; U.S. Department of Health and Human Services/Health Resources and Services Administration. 2000.

- quantifying differences in staffing in light of organizational responsibilities and relationships as well as the size of the population served by the agency; and
- understanding the role that schools of public health play in addressing public health workforce needs of these agencies.

## **Methodology**

The study had three components:

1. A Project Advisory Committee to provide guidance on the overall study methodology, the issues to be discussed and the questions to be asked of State and local public health agencies, and to assist with the interpretation of findings.
2. Identification and analysis of available data on the workforce of public health agencies in the six States studied.
3. A six State case study that included surveys and interviews with staff of State and local public health agencies in those States on their most pressing health workforce issues.

The six States selected for study were New Mexico, Montana, Georgia, California, Texas, and New York. The States were selected to assure representation of the four organizational models<sup>2</sup> which represent different relationships between the State and local public health agencies. The four models are:

- Centralized - a State operated public health system (New Mexico);
- Decentralized – a public health system operated by local government (Montana);
- Shared – a public health system jointly operated by State and local government (Georgia); and
- Mixed - a public health system with differing levels of State and local involvement (California, Texas, New York).

## **Findings**

The study yielded a number of findings regarding the public health workforce, the most important of which are presented below.

- The single biggest barrier to adequate staffing of governmental public health agencies was budget constraints.

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<sup>2</sup> Described in APHA, 2000.

- Public health agencies in all six States reported difficulty recruiting public health nurses (PHNs), especially in rural areas, but less difficulty retaining them.
- Public health physicians and dentists comprise a very small part of the public health workforce; they can be hard to recruit when vacancies arise, particularly in rural areas.
- In addition to the difficulty they experienced recruiting public health nurses and to a lesser extent, physicians and dentists, governmental public health agencies in the case study States reported difficulty recruiting for a variety of occupations, including: health educators, nutritionists, social workers, clerical staff,
  - epidemiologists, dental hygienists,
  - dental assistants, laboratory personnel, and home health aides.
- Public health agencies in border counties identified unmet need for public health workers who are bi-lingual; are culturally competent; and have up-to-date knowledge of tropical diseases, such as dengue and murine typhus.
- Beyond budget constraints, recruitment difficulties were attributed to general shortages of workers within an occupation (e.g., registered nurses, nutritionists), non-competitive salaries, and lengthy processing time for new hires. Rural public health agencies in most States reported drawing their staff from the local labor market and had more difficulty recruiting more educated, skilled public health workers than their urban or suburban counterparts.
- The variation in public health workers per capita in the three case study States with local public health workforce data (Georgia, New Mexico and New York) suggests differences in public health service delivery among these States.
- Rural health offices in the three States with data on the local public health workforce (Georgia, New Mexico and New York) tended to have more public health workers per capita, particularly public health nurses.

**Table 1. Rural and Urban Public Health Workforce in Three States**

	New York		New Mexico		Georgia	
	PH Workforce	Per 100,000 Pop	PH Workforce	Per 100,000 Pop	PH Workforce	Per 100,000 Pop
State	5,430	29	388	21	633	10
Local	7,272	38	721	40	7,387	90
Local urban	4,992	30	216	16	2,378	41
Local rural	2,280	96	505	111	5,009	216
Total	<b>12,702</b>	<b>67</b>	<b>1,109</b>	<b>61</b>	8,020	98

- Public health workers with formal public health training, such as a Master of Public Health (MPH), most commonly worked in State health departments or as leaders of large public health agencies; they were needed in small public health agencies, but rarely available.
- Staff of small public health agencies who obtained MPHs often left their agencies to work in larger organizations that offered better opportunities. A wide range of training needs for the existing public health workforce was identified, including training on clinical topics and management and supervision. The greatest unmet need reported was for training in core public health concepts.
- Public health agencies in the six States reported greater need for training in core public health concepts for staff without formal public health training.
- Lack of access to advanced education, including baccalaureate nursing and graduate studies, was a significant barrier to upgrading existing staff, particularly in rural areas.
- While there are a few examples of successful collaborations between schools of public health and public health agencies at the local level, schools of public health, in general, have done a poor job of partnering with these agencies.
- Public health agencies in some of the case study States were concerned about losing senior staff to retirement in the next five years and reported a need for better succession planning.

## **Recommendations**

Based on the findings, the study produced nine recommendations for consideration by National, State, and Local public policy makers.

- Learn more about what attracts potential public health workers to the field and use this information to develop innovative recruitment and marketing strategies for careers in public health.

- Provide more opportunities for public health training and education that are accessible to senior staff of district and local health offices, particularly those in leadership positions.
- Provide public health workers with support and assistance to further their education, both graduate and undergraduate, related to critical public health skills and competencies. This could include tuition reimbursement, release time, and increasing the availability of distance education or web-based course offerings.
- Create a service obligated scholarship or loan repayment program modeled after the National Health Service Corps that provides scholarship or loan repayment support in return for a commitment to work in local public health offices/agencies with shortages of public health workers.
- Identify and describe effective ‘career ladders’ within State public health systems that could assist other States in developing similar upgrading opportunities, particularly in shortage occupations.
- Encourage schools of public health, public health training centers, and other educational programs to be more responsive to the recruitment and training needs of local public health agencies, particularly those in remote locations. Identify and describe models of collaboration or ‘best practices’ between academia and public health practice. Provide incentives to encourage collaboration between relevant educational programs and local public health agencies.
- Support the development of a model public health curriculum that could help prepare public health professionals for contemporary public health practice and make the curriculum available to schools of public health, medicine, nursing, and other health professions.
- Provide dental public health training to more dentists and dental hygienists to work in local public health departments to run comprehensive preventive dental programs including fluoridation, screenings, sealants, and oral health education and advocacy.
- Monitor the size and composition of the public health workforce on a regular basis, with a focus on ‘functional’ enumeration, i.e., understanding the public health workforce within a State based on the roles and responsibilities of the public health system within the State.

## INTRODUCTION

The public health system is a complex network of organizations that coordinates efforts to protect, promote, and improve the health of the population as a whole. While governmental public health agencies (i.e., Federal, State and local) play a pivotal role in the planning and delivery of public health services, many other organizations comprise the public health system, including health care providers and associations, faith-based organizations, businesses, and schools.

The core functions of public health agencies have been defined as assessment (community diagnosis); policy development and leadership; and assurance of access to environmental, educational, and personal health services<sup>3</sup>. These functions are further delineated as ten essential public health services:

- Monitor health status to identify community health problems;
- Diagnose and investigate health problems and health hazards in the community;
- Inform, educate, and empower people about health issues;
- Mobilize community partnerships to identify and solve health problems;
- Develop policies and plans that support individual and community health efforts;
- Enforce laws and regulations that protect health and ensure safety;
- Link people to needed personal health services and assure the provision of health care when otherwise unavailable;
- Assure a competent public health and personal health care workforce;
- Evaluate effectiveness, accessibility, and quality of personal and population-based services; and
- Research for new insights and innovative solutions to health problems.<sup>4</sup>

Core public health services provided to communities include communicable disease control, community assessment, community outreach and education, environmental health services, epidemiology and surveillance, food safety, health education, restaurant inspections, tuberculosis testing and most recently emergency preparedness and bio-terrorism response.

The American public expects the public health system to protect the Nation from a wide range of health threats and dangers by preventing and fighting epidemics and the spread

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<sup>3</sup> Institute of Medicine, 1988.

<sup>4</sup> Public Health Functions Steering Committee, 1994.

of disease, protecting the Nation from environmental hazards, and responding to disasters.

The recent terrorist attacks have made the public acutely aware of the important responsibilities of the Nation's public health system and that a sufficient supply of appropriately prepared public health professionals is an essential component of this system.

A critical challenge for America is to better understand the health workforce needs for an effective public health system and to take the necessary steps to produce the needed number of health professionals with the appropriate skills and knowledge.

There have been a number of studies of the public health workforce over the past decade designed to help the health community better understand the composition of the workforce, its availability, its functions and the adequacy of its preparation to carry out its duties<sup>5</sup>. However, these efforts have been complicated by the fact that the public health workforce is not easily defined or measured. It is a very diverse workforce, working in many settings and providing a wide range of services. Public health workers are generally not licensed which would otherwise facilitate counting and studying this workforce. Responsibilities are shared between public agencies, voluntary hospitals and others in the health sector. In addition, within the public sector, responsibility is shared between different levels of government and several agencies. There are also major State-by-State variations in responsibility among State and local government and private groups, compounding the difficulty of counting and tracking the public health workforce. Additionally, responsibilities can vary within a State between rural and urban locations.

The National Center for Health Workforce Analysis in the Bureau of Health Professions, Health Resources and Services Administration, commissioned the Center for Health Workforce Studies at the School of Public Health, University at Albany, State University of New York to conduct a study of the public health workforce, focused on publicly funded health agencies and particularly on public health physicians, dentists and nurses as well as workers with formal public health training. In addition, the study assessed the role that schools of public health play in assisting these agencies to recruit, retain or provide continuing education to their workforce. Major goals of this study included:

- assessing the adequacy of the supply of these public health workers in relation to the demand for them;
- quantifying differences in staffing in light of organizational responsibilities and relationships as well as the size of the population served by the agency;
- understanding the role that schools of public health play in addressing public health workforce needs of these agencies.

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<sup>5</sup> e.g. NACCHO, 1995; Richardson, Casey & Rosenblatt, 1999; Rosenblatt, Casey & Richardson, 2001; Turnock & Hutchinson, 2000; U.S. Department of Health and Human Services/Health Resources and Services Administration, 2000.

## METHODOLOGY

The study had three components:

1. Convening a Project Advisory Committee to provide guidance on the overall study methodology, the issues to be discussed and the questions to be asked of State and local public health agencies, and to assist with the interpretation of findings.
2. Identification and analysis of available data on the workforce of public health agencies in the six States studied.
3. A six State case study that included surveys and interviews with staff of State and local public health agencies in those States on their most pressing health workforce issues.

### **Case studies and interviews with six State and thirty district or local health agencies in those States**

Interviews with State and local public health agencies were conducted in six (6) diverse States. The States were selected to assure representation of the four organizational models<sup>6</sup> which represent different relationships between the State and local public health agencies. The four models are: centralized (New Mexico); decentralized (Montana); shared (Georgia); and mixed (California, Texas, New York).

Because of the significant diversity of local public health agencies within States, including the population size and density in the areas served, at least five local or district public health agencies in each State, (including at least one urban, one rural, one suburban, and where appropriate, one agency on an international border), were selected to be in the case study. This allowed for an analysis of the staffing needs across the spectrum of operating environments under different models of sharing responsibility between State and local governments.

The fieldwork included surveys of participating district and local public health agencies, with topics including:

- general workforce issues;
- staffing and functions;
- adequacy of supply of public health nurses;
- public health physicians; oral health workforce;
- workers with formal public health training;
- training and continuing education needs; and
- collaborations.

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<sup>6</sup> Described in APHA, 2000.

The fieldwork also included interviews of key stakeholders in each of the six case study States, including State, district and local public health leaders and managers. Through these interviews as well as with discussions with the expert project advisory committee, the Center was able to compare functions, staffing, and training needs under the different State-local models for sharing responsibility for public health services. The interviews specifically explored issues around the recruitment and retention of public health physicians, dentists and nurses, as well as concerns with possible shortages of all categories of public health personnel. The interviews also explored the relationship between State, district, and local health departments and schools of public health.

The fieldwork aimed to identify the most pressing health workforce issues facing local, district, and State health departments today and whether these issues were driven by inadequate financial resources, lack of qualified candidates or the need for continuing professional education.

### **Data analysis**

The data analysis component involved analysis of data sets that contained information about the health professionals who provided public health services and/or who worked in public health agencies in the case study States. Comprehensive data sets on the public health workforce were found in Georgia, New Mexico and New York and are described in the case study sections of this report.

### **Project Advisory Committee**

The Center appointed a Project Advisory Committee consisting of health workforce experts; representatives of major public health interest groups, such as the Association of State and Territorial Health Organizations, the National Association of County and City Health Officers, the Public Health Foundation and the American Public Health Association; representatives of the other Federally-supported health workforce centers and Federal agencies such, as the Centers for Disease Control and Prevention and the Health Resources and Services Administration (see Appendix I).

The Project Advisory Committee, initially convened in December of 2002, advised the Center on the overall study methodology, the issues to be discussed and the questions to be asked of State, district and local public health agencies. The committee also helped facilitate collaboration and dialogue with public health organizations and leaders.

Upon completing the fieldwork, a one-day symposium was held in December of 2003 with the Project Advisory Committee and other stakeholders to:

- review study findings; assist with the interpretation of these findings; identify strategies to address the public health workforce issues consistent with the finding of this study; and identify potential future studies of the public health workforce.

## **FINDINGS:**

### **The Nurse Workforce in Public Health**

#### *Description of the Public Health Nursing Workforce*

Public health nurses (PHNs) played a number of different roles within their respective public health systems and these roles often varied by work setting and location. Direct patient services were usually provided by PHNs who worked in local health offices, while population-based services were provided by PHNs at local and, in some instances, district health offices. Program management was provided by PHNs in local, district, and State central offices. Some of the local and district health agencies in the case study States reported that funding cutbacks for programs have led to reductions in direct patient services at the local level provided by PHNs. In New York, for example, the advent of Medicaid managed care has resulted in a reduction in the level of direct patient services provided by local health agencies<sup>7</sup>.

States varied on the minimum qualifications required for PHNs. While all States required that a PHN hold a license to practice registered nursing in their State, New York and California also had minimum educational qualifications for PHNs. In New York, PHNs must have a baccalaureate degree in nursing. In California, PHNs must have a baccalaureate degree in nursing as well as public health nursing certification, based on college-level coursework in community health. Georgia, New Mexico, Montana and Texas have no minimum educational requirement for PHNs. In Georgia, PHNs who receive additional State-sponsored training can qualify as “expanded role” PHNs and practice under nurse protocols.

#### *Recruitment, Retention and Retirement of Public Health Nurses*

PHN recruitment difficulty was reported in all six case study States. A number of reasons were cited, including:

- *Budget constraints* - a major barrier to recruiting PHNs and in many instances resulted in vacant PHN items either going unfilled or being abolished.
- *Lack of qualified candidates* - a recruitment barrier cited by many health offices, particularly those in rural areas. The general shortage of registered nurses in the case study States was believed to contribute substantially to this problem.
- *Non-competitive salaries for PHNs* – another barrier to recruitment, especially as other health care providers, particularly hospitals, offered salary enhancements and sign-on bonuses to new recruits.

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<sup>7</sup> Schreiber et al., 2003.

- *Lengthy processing time for new hires* - a recruitment barrier that led to many registered nurses who were recruited for PHN positions ultimately accepting other jobs that allowed them to begin working much sooner.

These recruitment problems affected the existing PHN workforce. The inability to fill vacant PHN items typically led to chronic understaffing and difficult working conditions. Many nurse managers and supervisors reported that they had learned to ‘do more with less’, but in many instances they were unable to maintain the level of services provided. As a result, direct patient services were reduced (i.e., hours or cases); the start-up of new programs was delayed and population-based services were cut back.

Public health offices reported a variety of PHN recruitment strategies.

- Many of the States reported ‘continuous recruitment’ of PHNs, i.e., recruiting even when there were no vacancies in order to have a list of qualified applicants when vacancies arose.
- Rural health offices in New York and California reported ‘growing their own’ PHNs, i.e., recruiting registered nurses locally who were encouraged to complete baccalaureate nursing degrees in order to qualify for PHN positions.
- In New Mexico and Georgia, new PHNs with qualifying training and experience receive higher starting salaries.
- Georgia used a series of marketing strategies to attract more public health nurse applicants, including developing a brochure, attending job fairs and highlighting public health nursing careers on the State’s Department of Human Resources web-site.

In most of the States, newly recruited PHNs tended to stay. The factors that were thought to have the most influence on retention were autonomy, work hours, and benefits. In Georgia, however, PHN retention has become a growing concern. District and local health offices reported increasing turnover of newly hired PHNs, who may stay up to three years but then leave public health for a variety of reasons, including better opportunities in other health care settings. Both urban and rural district and local health offices reported increasing turnover of new hires.

When asked about upcoming PHN retirements, there were a wide range of responses. In some instances, district and local health offices anticipated a large number of retirements and were concerned about filling these vacancies, given the current PHN recruitment difficulties. Many believed that it would not be easy to replace their senior and most experienced PHNs, particularly district or local health offices in rural or border areas. In other instances, district and local health offices either did not anticipate losing many PHNs or viewed these retirements positively, as an opportunity to bring in ‘new blood’ or to avoid layoffs.

## *Education & Training Needs of Public Health Nurses*

Some of the district and local health offices reported need for PHN training that provided an overview of core public health concepts, while others wanted more in-depth training that included practical applications of these concepts. District and local health offices in the case study States identified three main areas of training needed for PHNs:

1. Core public health concepts, which included topics such as:

- Population health;
- Legal issues in public health;
- Bio-terrorism and emergency preparedness;
- Epidemiology;
- Public health nursing models;
- Policy development/program planning;
- Community assessment;
- Coalition building;
- Risk communication;

2. Clinical topics, including:

- Emerging infectious diseases;
- Immunizations;
- Basic assessment;
- Women's health;
- STDs;
- Family planning; and
- Tuberculosis.

3. Manager, supervisor, or leadership training.

In general, training in clinical topics was reported as easiest to find, while training in core public health concepts was reported as hardest to find. Financial support for PHN training typically drew from a variety of sources, including State and Federal grants, agency training budgets, and in some instances, collective bargaining funds. The financial

support often covered expenses such as registration or tuition fees, paid release time and the cost of travel to attend training.

A variety of strategies to address the training needs of PHNs were reported by State, district and local health offices, including:

- The more experienced PHNs in Montana mentored newer PHNs to help orient and support them in their new roles.
- The State Nursing Office of the Georgia Division of Public Health provided an on-line course on Population Health to PHNs working in district and local health offices.<sup>8</sup>
- The New York State Department of Health supported the development of a new Public Health/Community Health Nursing Course available on-line and free of charge through the New York State Nurses Association. While there was general consensus that advanced education for PHNs was important, opportunities were limited, particularly in rural areas. In the case study States with no minimum educational requirements for PHNs, a number of barriers to PHNs obtaining bachelors degrees in nursing were identified. These included:
  - Limited access to BSN completion programs;
  - Limited opportunities for distance learning education; and
  - Lack of financial incentives to obtain a BSN.

Similarly, respondents indicated that PHNs interested in pursuing MPHs encountered many of the same barriers:

- Limited access to MPH programs;
- Few distance learning opportunities; and
- Job opportunities for MPHs often limited to larger local health offices, district offices or State health departments.

### *Conclusions*

Local and district health offices in all six States, particularly those in rural areas, reported difficulty recruiting PHNs. Reasons for the recruitment difficulties included: budget constraints, a general shortage of RNs, non-competitive salaries and lengthy processing time for new hires. However, once recruited, PHNs were likely to be retained. Local and district health offices in some of the case study States anticipate a number of PHN

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<sup>8</sup> This course is part of a population health competency development program supported by a Health Resources and Services Administration, Bureau of Health Professions, Division of Nursing Grant (#6D11HP00368-02-01).

retirements in the next five years. Some are more concerned than others about the loss of their more experienced PHNs.

A wide range of PHN training needs were identified, including training in core public health concepts, clinical topics, and manager/leadership training. Training in core public health concepts was hardest to find and training in clinical topics the easiest to find. Lack of access to advanced education programs for PHNs, including BSN and MPH programs was identified as a significant problem, particularly in rural areas.

PHNs play a variety of roles, providing direct patient services, population based health services and program management. They represent a large and critical component of the public health workforce at State, district and local health offices. However, current recruitment difficulties, unmet training needs, and concern about an increasing number of PHN retirements in many State, district and local health may impact on the ability of the system to provide essential public health services and programs.

## **The Physician Workforce in Public Health**

### *Description of the Physician Workforce in Public Health*

While not as numerous as PHNs, public health physicians (PHPs) played a variety of important roles within the public health system. State, district and local health offices of all sizes were included in this study and they reported diverse roles and responsibilities for the PHPs who worked for them. PHPs ranged from retired physicians serving as county health officers, sometimes in a volunteer capacity, to contract physicians working part-time providing direct patient care in smaller health offices to physicians in leadership roles in the largest public health agencies in a State. Physicians served as medical consultants, clinicians, program directors and department administrators. Some health offices employed physicians as part of their ‘safety net’ services, in order to provide indigent care, while others utilized physicians only for core public health activities. Some agencies required physicians for their leadership positions while others did not, and this variation occurred within as well as between case study States. The most common role identified for PHPs was as a provider of direct patient care.

Leadership positions in all State-level and some district-level offices were reserved for physicians. Georgia’s district directors and New Mexico’s District Health Officers must be licensed physicians. In New York, Health Commissioners of the most populous counties (12 out of 58) also must be licensed physicians. PHPs in leadership positions at the State and regional levels or those PHPs in large urban centers were often expected to have formal public health training. These agencies typically had sufficient budgets to support this requirement and the pool of qualified applicants, sometimes drawn through national recruitment, tended to be large. Even so, expectations for formal public health training for PHPs in leadership roles were not always met. Formal public health training tended to be a hiring preference for many of these positions, rather than a requirement.

While physicians who worked in public health in the case study States were required to be licensed and in most instances board certified, requirements for formal public health

training varied widely. In California and Texas, county health officers were required to be licensed physicians. In Montana, each county must have a health officer who must be either a licensed physician or an MPH or equivalent, as determined by the State. Larger health offices, particularly those providing safety net services to indigent patients, were more likely to employ physicians directly, and, in some instances, recruited local physicians, sometimes as volunteers, to provide these services. The smaller, usually more rural health offices reported employing few physicians or none at all. Often, smaller health offices were directed by PHNs and physicians served as medical consultants or provided direct patient care services. Many of the physicians who provided these clinical services did so under contract, usually on a part-time basis. These health offices often had different expectations about the need for PHPs to have formal public health training than did the larger, more urban departments. Given the budget constraints of these health offices and the limited applicant pool in rural areas, these health offices were happy to find any physician willing to work for them – with or without formal public health training.

There were many examples in the case study States where formal public health training was desired, but not required, including:

- Georgia, where the district directors are PHPs who are expected to have formal public health training, but not all do.
- California, where the health officials are PHPs who are preferred to have formal public health training, but many do not.
- New York, where the Health Commissioners for the largest counties must be PHPs and are expected to have public health experience or education. The exact nature of this public health training is flexible and may be completion of an MPH or ‘comparable training’ plus three years of public health experience’.

Many of the physicians working in public health, in a variety of roles, have not had any formal public health training.

#### *Recruitment, Retention and Retirement of Public Health Physicians*

When asked whether health physicians were difficult to recruit, responses varied. The smaller, typically rural health offices in all six case study States reported difficulty recruiting PHPs, while the larger, urban health offices reported fewer problems recruiting physicians. Across the six States surveyed, there were similar barriers to PHP recruitment.

Budget constraints were the single biggest barrier to PHP recruitment and the situation was worse for small rural agencies. Reductions in health agency budgets have made what were often considered non-competitive salaries even less competitive. The recruitment difficulty experienced by rural health offices was, in part, attributed to the limited pool of qualified applicants willing to work in these small and often isolated communities. Lack of qualified applicants was more often cited as a problem for filling

PHP leadership positions than for filling PHP positions responsible for direct patient care. In Texas, a local health agency located on the Texas/Mexico border reported that it took over a year to fill a position for deputy director. This agency, while in a metropolitan area, was located in a region considered to be fairly isolated and rural.

Once recruited and employed, however, retention of PHPs was thought to be good. Survey respondents indicated that despite lower salaries, PHP positions offered regular working hours and other benefits that were attractive to physicians seeking a stable work situation. Retirement of PHPs was sometimes considered problematic, especially for these rural health offices. A rural health office in New York reported that their single PHP was expected to retire within the next five years and that they were afraid that they would not be able to find another physician to replace him. A small agency in rural East Texas reported that when their physician director retired, they fully expected him to be replaced by a public health nurse since they did not think they could successfully recruit a physician for the job.

#### *Continuing Education & Training*

Continuing education needs for PHPs included clinical topics as well as leadership/management training and core public health concepts. Most agencies, including those in many remote rural locations, reported that it was easiest to access continuing education for PHPs on topics related to clinical care. Some State health departments and regional public health training centers schedule special presentations to support continuing education of PHPs, including topics such as communicable diseases, emerging infectious diseases, and chronic disease management. However, the availability of opportunities for formal training in public health varied greatly. Some Schools of Public Health provided regional programs or distance education opportunities for formal training. If such training was available and in close proximity, the schedule of classes did not always accommodate PHPs who were occupied by their duties from 8 A.M. to 5 P.M. during the week. Many PHPs in leadership positions did not have any formal public health training even when it was required for their position and some found that when formal public health training was available, it was simply not accessible. The health offices included in the case study identified a need to improve access to formal public health education for PHPs, particularly those in leadership positions.

#### *Conclusions*

Public health physician involvement in public health leadership, clinical or administrative roles was often determined by the size of the local health office. Physicians in leadership positions at State or regional levels or in large urban centers were more likely to have formal public health training. Typically these agencies have budgets that can support these requirements and they have a larger pool of applicants to draw from. The smaller, rural agencies tended to use physicians primarily for clinical services and usually had fewer expectations for formal public health training.

Recruitment of physicians was more problematic for rural health offices than for urban ones. Budget constraints were identified as the single biggest barrier to the recruitment of PHPs. Larger health offices tended to recruit physicians either regionally or nationally,

while recruitment efforts of rural health offices tended to be local. The retention of PHPs was not viewed as a significant problem. The retirement of PHPs within the next five years was more likely to be a concern for small rural health offices than for larger urban ones.

Formal public health training for PHPs, even for those in leadership positions, was often a preference rather than a requirement. In addition, formal public health education opportunities were not easily accessible to PHPs, especially those in leadership positions. Some local health offices, particularly smaller ones, were not convinced of the need for formal public health training for PHPs, particularly when their role was limited to direct patient care.

## **The Oral Health Workforce in Public Health**

### *Description of the Oral Health Workforce in Public Health*

In general, dental professionals including dentists, dental hygienists and dental assistants, are a very small part of the public health workforce. Sites employing dentists utilized them to provide direct clinical treatment services, perhaps with some limited public health activities or oversight. Many departments often utilized contract dentists to provide indigent care and all six States utilized volunteer dentists to different degrees for service provision in the community. Four of the six States employed a State dental director. For many of the case study sites, the “oral health workforce” went beyond the standard dental staff and consisted of public health nursing staff or others who provided dental public health services.

Oral health programs in States included prevention services such as fluoridation advocacy, health education, and school or community-based programs for children, including fluoride rinses, screening, and sealant programs. Clinical services were also provided at some sites, including emergency and special needs care, pediatric services, and comprehensive services for Medicaid recipients or other indigent patients. Most States had some level of Statewide coordinated activity for prevention of dental disease, particularly if there was a State level dental director or department. However, these programs were not always available at the local level. The lack of funding for prevention activities or dental care was the primary reason preventing many departments from providing any dental services, although all case study States reported a very high level of need in their communities for dental public health services.

The minimum qualification for dentists working in public health at any level was a valid State DDS or DMD license. There were very few dentists working in the case study sites with an MPH or board certification in dental public health. While this type of training was considered important for dentists with leadership responsibilities, dentists with these qualifications were so rare that departments did not require it. In addition, most dentists working in a public dental clinic were providing indigent care; they were rarely engaged in population-based public health activities. State dental directors in some States were required to have formal public health training, while in other States it was a preferred qualification. Dentists’ roles varied across States, and across local health departments

within States. Beyond providing clinical services, the role of dentists in public health was not well defined. Those local health departments that employed dentists did so for the provision of safety net dental services. Dental public health activities were neither comprehensive nor well-coordinated. Administrators in the departments could not articulate a role for dentists in leadership positions within the departments, due to lack of precedent and funding for comprehensive dental public health activities.

### *Recruitment, Retention and Retirement of Oral Health Professionals*

All case study sites reported that recruitment of dental professionals was problematic. The wage differential between the private and public sectors was so great that sites reported difficulty in attracting applicants. Dentists who worked in local health departments tended to choose it for lifestyle reasons - they had less management responsibilities than if they owned their own practices, they kept a set schedule, benefits were good, and malpractice insurance was covered. Rural local health departments had great difficulty recruiting dentists due to their remote locations. While urban local health departments reported a relatively easier time hiring staff dentists, they were less successfully in finding dental directors, particularly when they were recruiting a dentist with public health training.

Dental hygienists (DHs) played a small role in public health in the case study States, with two exceptions. In one State, DHs conducted school-based clinical assessments and another State, a DH served as the State dental director. Dental hygienists were even more difficult to recruit due to the salary differences between the private and public sector. Dental assistants, on the other hand, were generally less difficult to recruit, except in one State that had no dental school and few dental assistant training programs.

Retention of oral health care professionals was not seen as problematic in most cases. Once a local health department found a good fit for an open position, retention was good. Retirement of dental professionals was not a concern either. The only exception was provider retirements in rural communities. In general, dentists followed the same recruitment and retention patterns as physicians; i.e., urban areas had a competitive advantage, with the needed volume of work to support a dentist, while rural areas drew from their local labor pools in creative ways or grew their own, in order to recruit and retain a provider.

All sites, regardless of whether they employed dentists, generally agreed there was great unmet need for dental services but not adequate funding for service provision. Although most dental services provided by local health departments were paid for by Medicaid reimbursement and grants, there were simply not enough resources within these funding streams to provide many services. The prevailing consensus among respondents was that even if local health departments had funding to expand oral health services, hiring a workforce to meet the expanded demand would be problematic. Lack of funding, however, was the fundamental restriction on service.

### *Continuing Education & Training*

A variety of continuing education and training needs for dentists or other oral health staff were cited by agencies with oral health programs staffed by dentists. Clinical topics included emergency, restorative and preventive dental care, HIV dentistry, pediatrics, periodontics, infection control, minor surgical procedures, and CPR. Public health topics included core public health concepts, current trends in public health dentistry, general management, dental law, Health Insurance Portability and Accountability Act (HIPAA), administrative skills, and population-focused dentistry. Fifteen dental public health residencies exist in the country, but they train very few providers, usually two or three per program, and those who complete these residencies rarely go on to work in local public health departments.

Local health departments reported sufficient training opportunities for most of the clinical topics listed. There was less availability of training for the public health topics. Resources were available in many cases, particularly in larger urban health departments, to support continuing education. Almost all local health departments employing dentists supported their dentists in attaining the continuing education required for licensure. Funding for tuition reimbursement and other additional benefits were more likely to be found in counties in good fiscal shape. Most local health departments reported training budgets funded by Federal, State and local grants.

### *Conclusions*

There were very few dentists and dental assistants, and even fewer dental hygienists in public health. Recruitment of dentists into public health service was difficult, but those who chose to work in public health tended to stay. Many dental public health programs at the case study sites were run by public health nurses or other staff, and utilized volunteer or contract dentists for services that required their expertise. Although lack of workers was not usually cited as a barrier to providing oral health services, the lack of funding for services and programs keeps the employer demand for oral health workers lower than the unmet need in the community for their services.

Most dentists employed by public health agencies were providing personal health services, not population health. Yet oral health is one of the key areas that could benefit from a population health approach. Dental caries are preventable, yet it remains the number one disease of childhood in America. This study found that the scarce dollars that local health departments had for oral health in many instances attempted to address the problem through the provision of direct patient services.

## **Workers with Formal Public Health Training and the Roles of Schools of Public Health**

### *Approach and focus*

This study assessed the need for professionals with formal public health training by State and local public health agencies. As a part of the assessment, the roles schools of public health (SPHs) played in addressing the workforce issues (e.g., recruitment, continuing education or advanced education) identified by these agencies were also evaluated. For purposes of this study, a public health professional was defined as “a person educated in public health or a related discipline who is employed to improve health through a population focus.”<sup>9</sup> This study assessed the need that State, district and local health offices had for workers with formal public health training, with a specific focus on the need for master’s prepared public health professionals (MPHs).

### *The need for and roles of MPHs*

Survey respondents from the case study States indicated that while they found MPH training useful for their workers, few of the district or local offices, particularly the smaller ones, had positions that required it. All six States, however, encouraged their public health leaders (at State, district, and local levels) to obtain MPH training. Positions requiring an MPH were most commonly found at State departments of health or larger district or local offices. At the district and local office levels, there was a preference for clinicians with MPHs. Examples were cited of clinicians with MPHs who were in leadership positions in district and local health offices who moved their agency away from traditional clinical services and toward an emphasis on population health.

While most district and local health leaders saw a need for training in core concepts in public health, they did not think their workers needed MPHs to acquire the basic skill set of a public health professional. In terms of advanced education, leaders and managers with masters of business administration (MBA) or masters of public administration (MPA) were as likely to be found in district and local health offices, particularly those in rural areas.

### *State-by-State findings*

When asked about the need for MPHs, key stakeholders in the case study States gave a variety of responses: California preferred individuals with MPHs in leadership positions at their local health offices, but this training was not required. In Georgia, formal public health training or experience was a preferred qualification for district director positions, but only half met this standard. In Montana, county health officers could hold an MPH in lieu of a medical license, if approved by the State. However, there were only 10 or 15 MPHs Statewide at the time of this study. In New Mexico, while an MPH was a preferred qualification for leadership positions in the public health system (e.g., district directors and district medical officers), it was not required. Most of the district health offices reported few staff with formal public health training in either district or local

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<sup>9</sup> Institute of Medicine, 2003.

health offices. In New York, staff with MPHs were most commonly found in the larger local health offices where the leaders of these offices were also likely to have formal public health training and/or experience. Both the State Commissioner of Health in New York and the Commissioners of Health in the twelve largest counties in New York (over 250,000 population) must be an MD/MPH. In Texas, State agencies and larger LHDs expressed a strong preference for MPHs in leadership positions, but did not require it.

#### *Recruitment and retention issues*

While the district and local health offices had some appreciation of the value of workers with formal public health training, few required it or had pay scales geared to attract workers with MPH training. Consequently, individuals with MPHs were unlikely to find job opportunities in district or local health offices that recognized and rewarded this advanced training. Similarly, existing workers who completed MPH training were more likely to leave for better opportunities elsewhere. One survey respondent said, “A worker who gets an MPH may use the degree as a ticket out of our agency.”

This situation leaves few incentives for individuals and agencies to work toward getting formal public health training for more workers. If gaining an MPH does not lead to an increase in pay, there may not be much of an incentive to get one. Similarly, if helping a worker obtain an MPH means they will likely leave, the agency may have little incentive to encourage advanced training. The smaller rural local health offices in the case study States were much less inclined to hire MPHs than their urban counterparts. The small workforce, low budgets, and categorical funding-driven activities did not support MPHs in the rural public health workforce.

There were substantial opportunity costs for individuals who sought MPH training. They sacrificed personal time and resources to get the training. And, once they had an MPH, they received more responsibility without more pay. One of the case study States was considering offering service-obligated scholarships to at least reduce the hardship on workers in local health offices who wanted this advanced training.

#### *The relationship of schools of public health to the district and local health offices*

While district and local health office directors in the case study States reported some collaborations with various health professions schools including schools of public health<sup>10</sup>, most viewed the schools of public health as largely uninvolved in helping district and local health offices to meet their need for training and upgrading their workforce. Schools of public health were characterized as being research-oriented and focused on training researchers or academicians. Research-oriented training failed to produce graduates who were equipped to work in district and local health offices. Some survey respondents reported that SPHs that were asked to develop linkages to assist with workforce development at district and local health offices were either indifferent or unwilling to change.

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<sup>10</sup> It is important to note that there are educational programs of public health within universities that do not have schools of public health. About one MPH in eight comes from these programs.

There were SPHs that were more successful in responding to the needs of the district and local health offices in their States as well as other neighboring States. Key stakeholders mentioned two universities with extended degree (distance-learning) training programs that allowed public health workers to continue their education while continuing to work. One university sponsored training institutes in several nearby States that brought together university faculty and local experts to provide educational opportunities for local health workers in those States. While these programs may currently be the exception, they show that it is possible for the SPHs to be more responsive to the needs of district and local health offices. Most district and local health offices described the need for training their workers in core public health concepts, and they recognized that SPHs were not the only institutions that could provide such training. In some of the case study States, the State departments of health or State associations offered training opportunities for public health workers. The challenges remain substantial for the local health offices in rural areas, however, as travel time can be as long as class time when distances are great. Some rural local health offices found that it made more sense to close shop for the day to attend training held in their community.

The State, district and local health offices that reported a relationship with a SPH clearly valued formal public health training. Those that did not were less convinced of their agency's need for MPHs. The local health agencies in rural areas were the ones that were least likely to have a relationship with a SPH, due to the challenges of distance.

#### *State by State SPHs and their work to support district and local health offices*

In California, New Mexico, Georgia, and New York, the relationship between SPHs and the State's district and local health offices was relatively weak. Schools of nursing and medicine in these States were more likely to have a relationship with these agencies, using them as training sites for their students. In Texas, there were some good examples of SPH/health office collaborations in the larger cities. Montana had a very strong relationship with the SPH at the University of Washington, due in part to grant funding that supported the provision of public health training in the northwest States.

#### *Conclusions and summary*

MPHs are needed and valued but rare in district and local health offices, especially those in rural locations. While there were good models of cooperation found, SPHs have done a poor job in collaborating with district and local health offices and in meeting their training needs.

In order to meet the needs identified by stakeholders in the public health systems of the case study States, schools of public health need to better understand and value public health practice. Further, they need to design curriculum and courses to prepare students for public health practice. This means teaching skills and developing real world cases and exercises. Where there have been successful models of collaboration, the driving force has often been a small number of dedicated faculty. The relationships between SPHs and the State and local public health systems, and the role of SPHs in training the public health workforce, should be driven by a SPH's overall sense of mission, not just

by individual faculty committed to meeting that need.

## Additional Study Findings

In addition to looking at recruitment, retention and training needs for public health nurses; public health physicians; and the oral health workforce in public health, this study also attempted to identify the most pressing workforce issues experienced by the public health systems in the case study States. The findings are presented below and fall into five areas:

- Other workforce shortages
- Differences in the size and composition of the public health workforce
- Rural/urban differences in local public health workforce recruitment and retention issues
- Public health workforce issues in border counties
- Concern about retirement

### *Other Workforce Shortages*

In addition to the difficulty they experienced recruiting public health nurses and to a lesser extent, physicians and dentists, governmental public health agencies in the case study States reported difficulty recruiting for a variety of occupations. The table below identifies by State the occupations that pose problems for district and local health offices.

**Table 2. Occupations with Reported Workforce Shortages, by State.**

Occupations	NY	GA	NM	CA	TX	MT
<b>Nutritionists/Dieticians</b>	X	X	X	X	X	
<b>Social Workers</b>	X		X		X	
<b>Health Educators</b>	X	X	X	X		
<b>Clerical Staff</b>	X	X	X	X		
<b>Epidemiologists</b>	X	X	X	X	X	
<b>Dental Hygienists and Dental Assistants</b>		X	X			
<b>Lab Personnel</b> including microbiologists and toxicologists				X	X	
<b>Home Health Aides</b>	X					
<b>Medical Assistants</b>			X			
<b>Environmentalists/Sanitaricians</b>				X		X
<b>Speech Language Pathologists</b>	X					
<b>Occupational and Physical Therapists</b>	X			X		

Survey respondents and key stakeholders described a variety of strategies to address these shortages. Some of these strategies are described below.

New Mexico is piloting the use of distance education to build a career ladder in nutrition. This includes upgrading clerks in the Women, Infants and Children (WIC) nutrition program to nutrition aides after they successfully complete on-line nutrition courses worth 9 hours of college credit. Plans are underway to develop a distance learning nutrition education program through the University of New Mexico.

Local health offices in New York described a career ladder in their environmental health titles. They reported hiring environmental technicians who were interested in pursuing the necessary coursework that qualified them to fill vacant sanitarian positions when openings arose.

Both New York and California described resource sharing as an approach to meeting need for epidemiologists, particularly in rural areas of these States. For example, in New York, a regional bio-terrorism/epidemiology pilot project supported an epidemiologist who was based in the largest county health office within the region, but served as a resource to all of the counties within the region.

#### *Differences in the size and composition of the public health workforce*

The public health workforce in New York, Georgia, and New Mexico, the three States included in the case study for which data on the size and composition of the public health workforce were available, were compared. Georgia had the highest number of public health workers per 100,000 population (95, compared to 66 in New York and 60 in New Mexico), and a much greater percentage of the public health workforce worked in local health departments (LHDs) (93%, compared to 66% in New Mexico and 58% in New York). A previous study of the CA public health workforce showed that in 1998 there were 100 public health workers per 100,000 population, with a range of 50-220 per 100,000 population depending on jurisdiction size.<sup>11</sup>

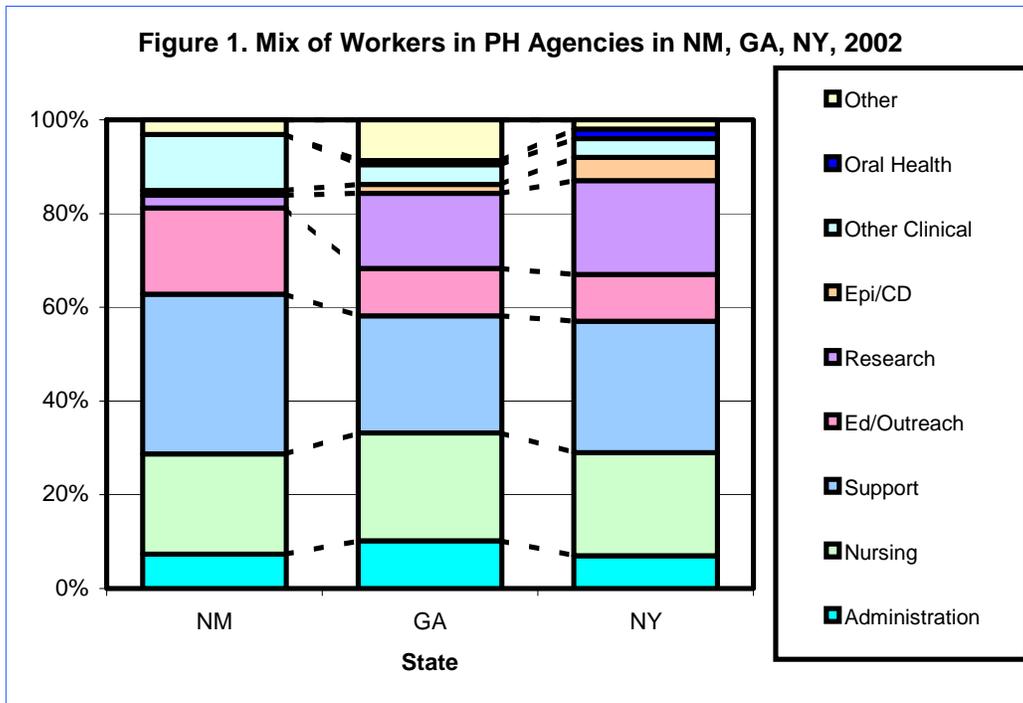
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<sup>11</sup> Mertz & Finocchio, 1999.

**Table 3. Summary of the Public Health Workforce in Three States**

	<b>New York</b>	<b>Georgia</b>	<b>New Mexico</b>
<b>Total</b>	12,600	8,000	1,100
Population, 2001	19,011,378	8,383,915	1,829,146
PH Workers per 100,000 Pop	66	95	60
PH Workers in LHDs	7,270	7,400	721
Nurses	22%	23%	22%
Scientific/Investigative	20%	16%	3%
Epidemiologists	5%	2%	1%
Education/outreach	10%	10%	19%
Support personnel	28%	25%	35%
Number of occupational titles	70	150	50

The public health system in all three States relied heavily on public health nurses, who constituted 22-23% of the public health workforce. Support personnel were also critical to the system, constituting 25-35% of the public health workforce in the three States. New York, however, had more scientific/investigative and epidemiological personnel on staff compared to Georgia and especially to New Mexico. Only 4% of New Mexico's public health workforce was either scientific/investigative personnel or epidemiologists. New Mexico, on the other hand, devoted a much greater percentage of their public health workforce to the functions of education and outreach.



A survey of the services provided by the public health systems in the three respective States supported a view that Georgia’s public health program was much broader than the programs of the other two States. Out of 37 possible services offered by State public health systems, only two (home health care and occupational safety and health) were not offered by any of the departments surveyed in Georgia. In contrast, the local health departments surveyed in New York offered fewer services, except in the New York City metro area. Similarly, the local health offices surveyed in New Mexico tended to offer fewer services than those reported in Georgia.

*Rural/urban differences in local public health workforce recruitment and retention issues*

Rural public health agencies in most States appeared to have more problems recruiting staff to their agencies than their urban or suburban counterparts. They reported drawing their staff from the local labor market and had greater difficulty recruiting more educated, skilled public health workers. These agencies cited both budget constraints and lack of qualified candidates as their two biggest barriers to recruitment. (This is an urban concern as well as a rural one.) These agencies also reported fewer management staff with formal public health training. In some instances, staff who obtained MPHs were more likely to move to larger public health agencies, attracted by better pay. Rural public health agencies were the least likely to report a strong relationship with schools of public health and they were most likely to identify lack of access to training and advanced education (both undergraduate and graduate programs) as a substantial barrier to upgrading their workforce.

**Table 4. Rural and Urban Public Health Workforce in Three States**

	New York		New Mexico		Georgia	
	PH Workforce	Per 100,000 Pop	PH Workforce	Per 100,000 Pop	PH Workforce	Per 100,000 Pop
State	5,430	29	388	21	633	10
Local	7,272	38	721	40	7,387	90
Local urban	4,992	30	216	16	2,378	41
Local rural	2,280	96	505	111	5,009	216
<b>Total</b>	<b>12,702</b>	<b>67</b>	<b>1,109</b>	<b>61</b>	<b>8,020</b>	<b>98</b>

*Additional public health workforce issues in border counties*

Public health agencies located in border counties of Texas, California, and New Mexico were included in the case study. While these agencies had many of the same issues as other local health offices within their State, they also identified other issues unique to their location at the US-Mexico border. These agencies found that the mobility of the population made epidemiologic work difficult. They reported a need for bi-lingual, culturally competent public health workers. Further, they identified the need to assure that their workers have up-to-date knowledge of tropical diseases likely to be seen in border communities, such as dengue and murine typhus. These agencies also emphasized the importance of cross-border partnerships.

*Concern about retirement*

Some of the district and local health offices that participated in this study expressed concern about losing senior staff in the public health workforce to retirement in the next five years. In general, public health agencies in rural areas were more concerned about the impact of retirements than urban or suburban public health agencies. However, agencies in some States were much more concerned than agencies in other States, as illustrated in the examples below.

New Mexico recently enacted a new law allowing retired public employees to collect their pensions and continue to work in the State system. It was unclear whether this would prove to be an incentive for retaining public health workers in New Mexico, particularly those in shortage occupations.

A county health department in upstate New York reported that they expected to lose about half of their PHNs to retirement in the coming year as a result of an early retirement incentive. They further stated that given significant budget constraints within the county, they did not anticipate replacing those who will leave. While they clearly recognized that this downsizing would impact on the services they provide to their community, they had not yet determined what specific changes would be made to their programs and/or levels of service.

Some of the local health departments in California expressed less concern about retirements, with some administrators welcoming the opportunity to infuse ‘new blood’ into their system and others reporting that retirements would reduce the number of layoffs related to shrinking agency budgets.

Some agencies included in the study reported a need to engage in succession planning in anticipation of losing senior staff in many district and local health offices. They also indicated a need for training to help prepare staff for leadership roles.

## Recommendations

- Learn more about what attracts potential public health workers to the field and use this information to develop innovative recruitment and marketing strategies for careers in public health.
- Provide more opportunities for public health training and education that are accessible to senior staff of district and local health offices, particularly those in leadership positions.
- Provide public health workers with the necessary support and assistance to further their education, both graduate and undergraduate. This could include tuition reimbursement, release time and increasing the availability of distance education or web-based course offerings.
- Create a service obligated scholarship or loan repayment program modeled after the National Health Service Corps that provides scholarship or loan repayment support in return for a commitment to work in district and local public health offices.
- Identify and describe effective ‘career ladders’ within State public health systems that could assist other States in developing similar upgrading opportunities, particularly in shortage occupations.
- Encourage schools of public health, public health training centers and other educational programs to be more responsive to the recruitment and training needs of district and local health offices, particularly those in remote locations. Identify and describe models of collaboration or ‘best practices’ between academia and public health practice. Provide incentives to encourage collaboration between relevant educational programs and district and local health offices.
- Support the development of a model public health curriculum that could help prepare public health professionals for contemporary public health practice and make the curriculum available to schools of public health, medicine, nursing and other professional education programs.
- Provide dental public health training to more dentists and dental hygienists to work in local public health departments to run comprehensive preventive dental programs including fluoridation, screenings, sealants, and community health education and advocacy.
- Monitor the size and composition of the public health workforce on a regular basis, with a focus on ‘functional’ enumeration, i.e., understanding the public health workforce within a State based on the roles and responsibilities of the public health system within the State.

## California Public Health Case Study Findings

California is the most populous State in the U.S., with a population of nearly 34 million people in 2000. It is also one of the most diverse States, with a population that is approximately 32% Hispanic/Latino(a), 11% Asian/Pacific Islander, 7% Black/African American, and 1% American Indian/Alaska Native. California is also one of the most urbanized States, with 88% of its population living in metropolitan areas. Its poverty rate slightly exceeds the national rate at 14% (versus 12% nationally).<sup>12</sup>

### General

1. *Describe the PH system model in the State (relationship between State and local health departments).*

California's model of public health is a mixed model with some programs administratively centralized through the State Department of Health and others at the local level. Each of the 58 counties in California has a department of health, and is required by law to have a Health Officer. In addition, four cities also have a department of health. Each county department is part of the local county government system, overseen by the county Board of Supervisors. Decision-making powers regarding funding, staffing, and service delivery are held entirely at the county level but must comply with State regulations and laws.

2. *Describe the State and local PH offices included in the field work. (#, size, location, urban/rural, border and workforce composition)*

The six case study sites in California included five local health departments in the following localities:

- 1) A rural central valley county supported by a mix of agriculture and services with a large government sector including a Naval Air Station.
- 2) An urban county in the Bay Area, heavily high-tech focused.
- 3) A densely populated conservative urban county between San Diego and Los Angeles.
- 4) A rural county on the Mexican border, heavily agricultural, but primarily a desert county with a high Latino population.
- 5) A mixed rural/urban county in central northern California, primarily rural, with an urban hub that accounts for 50% of the county's population.

The Local Public Health Services Program served as the sixth case study site. This program, run by the State, staffs 11 small rural counties in central/north/eastern California with public health nurses and environmental health scientists.

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<sup>12</sup> U.S. Bureau of the Census, 2000.

*3. Describe range of services provided at local and State level.*

The State Department of Health Services runs a wide range of programs, mostly focused on administering health care delivery and financing programs such as Medicaid, SCHIP, licensing and certification, and health information and planning. While the county and State departments interact through these programs in many ways, the Department of Prevention Services and the Department of Primary Care and Family Health (PCFH) run the public health programs most associated with county departments of public health.

For example, the PCFH department runs the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), Maternal Child Health, Family Planning, Genetic Services, Primary and Rural Health Care Systems, and Children's Medical Services (CMS) programs. The Prevention Services department runs the divisions of Emergency Preparedness, Laboratory Sciences, Binational Border Health, California Conference of Local Health Officers (CCLHO), Chronic Disease and Injury Control, Communicable Disease, Water Quality and Environmental Management, Environmental & Occupational Disease Control, AIDS, Food, Drug and Radiation Safety, and Clinical Preventive Medicine. The State provides or passes through categorical grant funding for many of these programs to the county, however the county administration decides ultimately how the grants are used to meet the public health goals.

Counties ranged in the number of services they were able to offer. In general, the urban counties offered more services than the rural counties. All counties provided the core public health services of communicable disease control, case management, epidemiology and surveillance, laboratory services, and health education. Only one county provided comprehensive primary care services. No county provided obstetrical services. (See Table below)

**Table 5. Services Provided by Five Local Public Health Departments in California**

<b>SERVICE</b>	<b>Site 1</b>	<b>Site 2</b>	<b>Site 3</b>	<b>Site 4</b>	<b>Site 5</b>	<b>Percent Providing</b>
Adult Immunizations	1	1	1	1	1	100%
Bioterrorism	1	1	1	1	1	100%
Case Management	1	1	1	1	1	100%
Child Health	1	1	1	1	1	100%
Communicable Disease Control	1	1	1	1	1	100%
Community Assessment	1	1	1	1	1	100%
Community Outreach and Education	1	1	1	1	1	100%
Epidemiology and Surveillance	1	1	1	1	1	100%
Health Education/ Risk Reduction	1	1	1	1	1	100%
HIV/AIDS Testing and Counseling	1	1	1	1	1	100%
HIV/AIDS Treatment	1	1	1	1	1	100%
Laboratory Services	1	1	1	1	1	100%
Tobacco Prevention	1	1	1	1	1	100%
Tuberculosis Testing	1	1	1	1	1	100%
Tuberculosis Treatment	1	1	1	1	1	100%
Dental Health	1	1	1	1	0	80%
Environmental Health	1	1	1	1	0	80%
Inspections and/or Licensing	1	1	1	0	1	80%
Maternal Health Programs	1	1	0	1	1	80%
STD Testing and Counseling	1	1	1	0	1	80%
STD Treatment	1	1	1	0	1	80%
Violence Prevention	1	1	0	1	1	80%
Animal Control	1	0	1	1	0	60%
Chronic Disease Control	1	1	0	0	1	60%
Behavioral / Mental Health	0	1	1	0	0	40%
Family Planning	1	0	1	0	0	40%
Injury Control	0	0	1	0	1	40%
Occupational Safety and Health	1	0	1	0	0	40%
School Health	0	1	0	0	1	40%
Screening and Treating the Homeless	0	1	1	0	0	40%
Home Health Care	0	0	0	0	1	20%
Prenatal Care	0	1	0	0	0	20%
Primary Care (Comprehensive)	0	1	0	0	0	20%
School Based Clinics	0	1	0	0	0	20%
Substance Abuse Services	0	0	1	0	0	20%
Veterinarian Public Health Activities	0	0	1	0	0	20%
Obstetrical Care	0	0	0	0	0	0%
<b>Total Number Provided</b>	<b>26</b>	<b>29</b>	<b>28</b>	<b>20</b>	<b>24</b>	

*4a. What are the most pressing recruitment and retention problems facing the PH offices studied?*

From an administrative standpoint, department and State budgetary issues were a huge problem, as 4 of the 5 counties and the State were all under hiring freezes. This does not mean that they couldn't eventually hire for an open position, but it did make the process for opening a position and working with human resources to get the position filled very time consuming. In many cases, the positions must be approved by the Board of Supervisors or the Administrative department before being released.

Workforce recruitment difficulties varied by profession and region, however a theme repeated across the State is that the applicant pool of qualified professionals is very limited, particularly for those professionals needing advanced degrees and certifications, and the pay scales at most departments is not comparable with the private sector pay rates.

Retention of professionals was relatively good within the departments. Most counties provided a good medical benefits and retirement package and other benefits including regular hours, payment of malpractice insurance and continuing education fees, and educational incentives. The larger urban counties did not have much problem with retention. Some rural counties competed with other departments in their region for the local workforce, and rural communities found retention of out-of-area recruits to be problematic.

*4b. Do State and local health departments encounter difficulty recruiting or retaining RNs, physicians, dentists or MPHs?*

DHS is a highly politicized environment and recruiting and retaining health professionals to work in Sacramento can be difficult. Locally, the difficulties vary by profession and geography.

Public health nurses (PHNs) in California must have a BSN, making the pool of applicants much smaller than the Statewide pool of RNs. Recruiting PHNs was not difficult in the urban areas, however in rural areas there seemed to be a smaller pool of qualified applicants causing severe recruitment problems. The nursing workforce is local/regional, so most recruitment is done at that level.

Two rural counties had to fill their PHN positions with RNs due to PHN workforce shortages, and the time to fill a vacancy was much longer in rural counties. Rural counties tended to compete for the regional PHN workforce, with local conditions dictating movement of the workforce. Urban counties had quite the opposite experience, the applicant pool was larger and recruitment was not seen as extremely problematic. High vacancy rates for PHNs in urban counties were attributed more to administrative issues in hiring than to workforce availability. Retention of PHNs was very good across all counties.

Physicians were difficult recruit to public health departments in all counties, but again, the rural counties had a particularly difficult time. Only one urban county did not have

any difficulties attracting physicians. In general it was noted that there is a very small pool of public health trained physicians, so they can take their pick of work environments. Urban departments that can offer more money and benefits can have stricter requirements around qualifications; rural departments generally take anything they can get. Most departments did statewide and national searches for physicians. The new infusion of bio-terrorism money has lead many departments to add a deputy health officer position, increasing the competition for public health trained physicians. Retention of the physician workforce was generally good. Once a physician took a position and settled in the community, they stayed.

Dentists were much more difficult to recruit than nurses or physicians. The role of dentists within public health departments was very loosely defined, and only three of the five counties provided any dental services. Most dentists working in public health were really just doing direct patient care in a county run clinic. Their pay appeared to be less on average than what these providers could make in the private sector. However, once a dentist came to work in public health, they tended to stay for personal reasons such as preferring the regular work schedule, not having the hassle of running a practice, and having good benefits packages.

5. *Which of the following has the most significant impact on the recruitment and retention of PH workers at State and local health departments?*

- Budget constraints - top issue, affected entire operation, including recruitment, hiring, benefits, pay, etc.
- Lack of qualified candidates - pool of PH professionals is very small
- Non-competitive salaries - less of an issue, people go to work in public health for reasons other than money
- Need for continuing professional education – not listed as problematic except when positions were under-filled and the staff need upgrading. Continuing education was generally less than what was needed in these cases, i.e., more educational support for a degree.

6. *How do staffing patterns and workforce needs at State and local health departments vary based on rural, urban location or proximity to a US border?*

In an urban department there were more services for the money because the population was all in close proximity. In rural areas there was much more time needed for travel. PHN staffing may differ in terms of having regional field nurses between urban and rural. Public health challenges may differ between urban and rural, dictating different staff needs.

## **Public Health Nurses**

7. *Describe the Public Health Nurse (PHN) workforce, including qualifications, formal public health training requirements, and roles.*

Qualifications for PHNs: All PHNs in California must have a BSN and a Public Health Nursing Certification. All departments required this as the minimum qualification for an entry-level staff PHN. Managers tended to need 3-5 years of experience as well, and directors tended to need a MSN or MPH in addition to the PHN certification.

Formal PH Training Requirements: This was only required in terms of an MPH for director level PHNs, and only at urban departments. While it was preferred that PHNs have formal public health training beyond that required for PHN certification, very few PHNs did, particularly in rural communities.

Roles (see Table 4): Each department surveyed was asked to indicate the roles of their PHNs and to rank the importance of these roles. PHNs roles varied across departments; all provide Health Education and Community Surveillance, Individual Outreach, Counseling and Advocacy for Patients, Program Evaluation and System Surveillance, Public Policy Development and Health Education Program Development. On average, individual level interventions were ranked of highest importance, program planning and evaluation ranked second highest and system level interventions ranked third.

**Table 6. PHN Roles in California Public Health Departments**

<b>PHN Roles in California:</b>		
<b>Role (Level)</b>	<b>PHN Role in % of Counties</b>	<b>Average Importance (scale 1-4)</b>
Health Education (Individual)	100%	3.80
Surveillance (Community)	100%	3.80
Outreach (Individual)	100%	3.60
Counseling and Advocacy for Patients (Individual)	100%	3.40
Program Evaluation (Community)	100%	3.20
Surveillance (System)	100%	3.20
Public Policy Development (System)	100%	3.00
Health Education Program Development (Community)	100%	2.60
Coalition Building (System)	83%	4.00
Disease Investigation (Individual)	83%	3.80
Medical Treatments (Individual)	83%	3.75
Case Management (Individual)	83%	3.60
Disease Investigation (Community)	83%	3.60
Screening Program Development (Community)	83%	3.40
Social Marketing (System)	83%	1.80
Screening (Individual)	67%	4.00
Counseling and Advocacy for Communities	67%	3.50

(Community)		
Public Policy Development (Community)	67%	2.33
Community Organizing (Community)	50%	3.67
Other: Quality Improvement	17%	4.00
Other: Staff Education	17%	4.00
Other: Community Collaboration	17%	4.00
Other: Vaccination	17%	3.00
Other: Jail Health	17%	n/a

*8a. Do State and local health departments encounter difficulty recruiting or retaining PHNs?*

Yes. Recruitment tended to be difficult, (for different reasons between urban and rural) although retention tended to be good.

*8b. If so, why?*

Recruitment difficulty is a function of the department fiscal situation, the local labor market, and the pool of applicants.

*8c. How does it impact PHN hiring, roles, services?*

Many departments had “open recruitment” for PHNs, meaning they continuously recruit in order to keep a listing of certified potential applicants for the job. In some rural counties, they underfill the positions meaning that some services are not delivered adequately due to the legislated practice restrictions of RNs versus PHNs. Counties with large numbers of vacancies have to cut back on services because of staff shortages.

*9a. What are the most pressing continuing education training needs for PHNs?*

Bioterrorism and disaster preparedness were listed most often as CE training needs, and 75% of respondents did not feel there were adequate training opportunities for PHNs in these subjects. Communicable disease training, core public health principles, epidemiology, and public health nursing models were listed as important continuing education topics. Again, most respondents felt that training in these topics was not available.

**Table 7. Percent of Departments Reporting Continuing Education Needs for PHNs, by Content Area**

<b>Topic</b>	<b>Percent of Departments</b>
Bioterrorism/Disaster Preparedness	67%
Communicable Disease	50%
Core Public Health Principles	33%
Epi and Infection Control	33%
PHN Practice Model	33%
Alternative Medicine	17%
Childhood Obesity	17%
CPR	17%
Dental Health	17%
Immunization	17%
NCAST	17%
Public Health Legal Studies	17%
Program Planning and Eval	17%
Spanish	17%
TB	17%
Women's and Family Health	17%
STDs	17%
Alcohol and Drug Use	17%
Domestic Violence	17%
Nutrition	17%

*9b. Are there sufficient training opportunities?*

Opportunities varied by topic. For the most requested continuing education topics, there were not sufficient training opportunities.

*9c. Are there adequate resources to support training opportunities?*

There seemed to be adequate resources to support the required continuing education for licensure at all departments. Most departments had an agency training budget that drew from Federal, State and local funds. Funding for tuition reimbursement and other additional benefits were more likely to be found in counties in good fiscal shape.

*10. How many (%) PHNs are expected to retire in the next five years?*

Statewide, 45 county-level PHN retirements were predicted in the next five years, just under 15% of the PHN workforce across all counties. The range at the county level was from 4% to 29% of the workforce. Several administrators indicated that attrition made room for “new blood” and fresh ideas, while in another county administrators reported that attrition of the workforce was good as it meant fewer layoffs. In those counties

where PHN recruitment was extremely difficult (rural, border counties) the retirements were viewed with concern.

## Public Health Physicians

*11. Describe the physician workforce in public health, including qualifications, formal public health training requirements, and roles.*

Qualifications: All counties in California were required by law to have a Health Officer who is a licensed physician. Most departments preferred physicians to have a valid license (MD, DO) and board certification in preventive medicine or an MPH; however, a few departments only required this for directors. Managers must have some supervisory experience (3-5 years) while directors must have a significant amount of experience along with proven public health competencies.

Formal public health training: While all counties preferred MPH or board certification in preventive medicine, the labor pool of these physicians was so small that very few made it a job requirement. Only one county required that staff physicians have either an MPH or specialty board certification. Three counties required an MPH for any physicians at the program management level. Four counties required an MPH or board certification in a specialty for a director level physician.

Roles: Physicians played various roles across counties, with some being more involved in program management and administration, and others more involved in direct patient care.

**Table 8. Physician Roles in California Public Health Departments**

<b>MD Roles in California:</b>		
<b>Role (Level)</b>	<b>MD Role in % of Counties</b>	<b>Average Importance (scale 1-4)</b>
Disease Investigation (Individual)	100%	4.00
Health Education (Individual)	100%	3.75
Counseling and Advocacy for Communities (Community)	100%	3.75
Program Evaluation (Community)	100%	3.75
Medical Treatments (Individual)	100%	3.50
Public Policy Development (Community)	100%	3.50
Disease Investigation (Community)	100%	3.25
Surveillance (Community)	100%	3.25
Screening Program Development (Community)	100%	2.50
Public Policy Development (System)	80%	4.00
Counseling and Advocacy for Patients (Individual)	80%	3.75
Health Education Program Development (Community)	80%	3.75

Coalition Building (System)	80%	3.67
Surveillance (System)	80%	3.67
Screening (Individual)	80%	3.00
Case Management (Individual)	60%	3.67
Community Organizing (Community)	60%	3.67
Outreach (Individual)	60%	3.33
Social Marketing (System)	60%	3.00
Facility Licensing Inspectors (System)	60%	2.50

Each department surveyed was asked to indicate the roles of their MDs and to rank the importance of these roles. MDs roles varied across department; all provided Individual Disease Investigation; Health Education, Counseling and Advocacy for Communities; Program Evaluation; Medical Treatments; Public Policy Development; Community Disease Investigation, Surveillance; and Screening Program Development. On average, individual level interventions were ranked of highest importance, program planning and evaluation ranked second highest and system level interventions ranked third.

*12a. Do State and local health departments encounter difficulty recruiting or retaining physicians for PH jobs?*

Occasionally. The pool of qualified candidates was relatively small, making it particularly hard for rural counties to find a well-qualified health officer. The new bio-terrorism money has been used in many counties to add a deputy health officer who was a physician so competition has increased. Once hired, physicians tended to stay on.

*12b. If so, why?*

The pool of qualified applicants was small.

*12c. How does it impact on physician hiring, roles, services?*

Hiring a physician took up to two years in some counties. This impacted the county considerably if the position was the health officer. Most counties felt the budgeted positions for physicians were adequate. The impact of vacancies on services would depend on the physician's role in the department.

*13a. What are the most pressing continuing education training needs for physicians in public health jobs?*

Bioterrorism and disaster preparedness were listed by 60% of departments as a continuing education need for physicians, however these departments did not feel there were adequate training opportunities. Management, politics, policy development and implementation were listed second most often, and were more likely to have continuing education available on these topics.



**Table 9. Percent of Departments Reporting Continuing Education Needs for Physicians, by Content Area**

<b>Topic</b>	<b>Percent of Departments</b>
Bioterrorism/Disaster Preparedness	60%
Management	40%
Politics, Policy Development and Adoption	40%
Communicable Disease	20%
Content Focused Learning (TB, STD, HIV, MCH)	20%
Disease Specific Training (e.g. anthrax)	20%
Epidemiology	20%
Leadership	20%
Outbreak Control/Investigation	20%
Public Health Medical Collaboration	20%
Primary Prevention Integration into LHD & Community Activities	20%
Program Planning & Evaluation	20%

*13b. Are there sufficient training opportunities?*

There were sufficient training opportunities for the disease and topic-specific issues such as TB or communicable diseases, but not for the more general topics such as leadership, evaluation, epidemiology, and politics and policy.

*13c. Are there adequate resources to support training opportunities?*

Most departments had a training budget funded by Federal, State and local grants. All departments supported the physicians in attaining the continuing education required for licensure. Funding for tuition reimbursement and other additional benefits were more likely to be found in counties in good fiscal shape.

*14. How many (%) physicians in public health jobs are expected to retire in the next five years?*

Statewide, 5 county-level physician retirements were predicted in the next five years, just under 10% of the physician workforce across all counties. The percent of all public health physicians predicted to retire range from 5% to 67% across counties. In some cases, retirement of the physician workforce was not a huge concern. However, in those counties where physician recruitment was extremely difficult (rural, border counties), the retirements were viewed with concern.

## The Oral Health Workforce in Public Health

15. Describe the oral health workforce in public health, including qualifications, formal public health training requirements, and roles.

The oral health workforce in public health departments was sparse, and consisted of more than just dentists. In many departments without an oral health professional, the public health nursing staff or others provided dental public health services. If a dentist did work for the department they were doing direct clinical services, perhaps with some public health activities. Three of the five counties surveyed indicated they employed dental staff.

Qualifications: Dentists working in public health at any level are only required to have a valid State DDS or DMD license.

Formal Public Health Training: There were no dentists working in the case study sites with an MPH or board certification in dental public health. This type of training was considered important by administrators, but a dentist with these qualifications was so rare they cannot require it. In addition, most dentists working in a public dental clinic were providing indigent care, rarely doing “public health” activities.

Roles: The role of dentists in public health departments was not well defined. Most departments only employed dentists if they were serving as a safety net provider. Very few dental public health activities were found. Administrators in the departments could not articulate a role for dentists in leadership positions within the departments, for lack of precedent and funding for such activities.

Each department surveyed was asked to indicate the roles of their dentists and to rank the importance of these roles. Dentist’s roles varied across departments; all provided health education, screening, assessment of oral health status and needs, and analysis of determinants of identified need and these were all ranked of highest importance as a role for dentists in the department.

On average, roles in direct patient care, assessment and policy development all ranked 3.5 in importance on a scale of 1-4. Roles in assurance ranked 3.25 in importance on average. Direct patient care roles were performed most often (76%), followed closely by assessment (75%), policy development (67%) and assurance (61%).

**Table 10. Dentist Roles in California Public Health Departments**

<b>DDS Roles in California:</b>		
<b>Role (Level)</b>	<b>DDS Role in % of Counties</b>	<b>Average Importance (scale 1-4)</b>
Health Education	100%	4.00
Screening	100%	4.00

Assess oral health status and needs	100%	4.00
Analyze determinants of identified oral health needs	100%	4.00
Case Management	67%	4.00
Counseling and Advocacy for Patients	67%	4.00
Provide leadership to address oral health	67%	4.00
Link people to oral health services	67%	4.00
Support services w/primary and secondary prevention	67%	4.00
Medical Treatments	67%	3.50
Disease Investigation	67%	3.50
Inform, educate public regarding oral health problems	67%	3.50
Promote and enforce laws and regulations	67%	3.50
Assess fluoridation status of water systems	67%	3.00
Develop plans & policies	67%	3.00
Evaluate effectiveness, accessibility and quality	67%	2.50
Outreach	67%	1.50
Implement oral health surveillance system	33%	3.00
Conduct research and support demonstration projects	33%	2.00

*16a. Do State and local health departments encounter difficulty recruiting or retaining oral health workers?*

Yes. The high cost of providing dental care prevented many departments from providing any dental services. Those that did had an easier time hiring staff dentists than a dental director, as it was extremely hard to find a dentist with public health training.

*16b. If so, why?*

Wages in the private sector were so out of proportion to what public health departments could pay that very few dentists consider applying for the position. Those that do tended to choose it for lifestyle reasons, they didn't have to bother with owning a practice, have a set schedule etc.

*16c. How does it impact hiring, roles, services?*

Counties employing dentists said there was great need to expand services, but no funding to do so. Most dental services were paid by Medicaid reimbursement and grants; there were simply not enough resources there to expand services. Many who needed but could not get services were not eligible for any insurance, and therefore needed pro bono

services. Hiring a workforce might be problematic if services were expanded, but the service delivery was fundamentally restricted by a lack of funding.

*17a. What are the most pressing continuing education training needs for oral health staff?*

A variety of topics were listed across agencies, however none came out as more or less important.

**Table 11. Percent of Departments Reporting Continuing Education Needs for Dentists, by Content Area**

<b>Topic</b>	<b>Percent of Departments</b>
CPR	33%
Current Trends in Dentistry	33%
Dental Law	33%
Dentistry with HIV Population	33%
HIPAA	33%
Infection Control	33%
Minor Surgical Procedures	33%
Pediatric Dentistry	33%
Population-focused dentistry	33%

*17b. Are there sufficient training opportunities?*

Yes, for all topics listed except population-focused dentistry.

*17c. Are there adequate resources to support training opportunities?*

Most departments had a training budget funded by Federal, State and local grants. All departments supported the dentists in attaining the continuing education required for licensure. Funding for tuition reimbursement and other additional benefits were more likely to be found in counties in good fiscal shape.

*18. How many (%) oral health staff are expected to retire in the next five years?*

Among the three counties employing dentists, three retirements were predicted in the next five years, or 35% of the dentist workforce across those counties. The range at the county level was from 0% to 40% of the workforce.

## **MPHs in Public Health**

*19. Do local and State health departments employ MPHs or encourage existing staff to obtain MPHs or other formal public health training?*

Yes.

20. *What roles do MPHs play in local and State health departments?*

Clinicians with MPHs played leadership roles within the departments and programs. Staff with MPH training who were not clinicians were usually analysts of some sort, however these were rare.

21. *Is an MPH required for leadership positions in local and State health departments?*

Not always required, but preferred.

22. *Do local and State health departments experience difficulty recruiting or retaining MPHs?*

Generally, they need people with MPH preparation. Specifically, they need clinicians with MPH preparation and people with a considerable amount of experience.

## **Collaborations**

23. *Do local or State health departments have a relationship with a school of public health or an MPH program, a school of nursing, or a school of medicine/ dentistry or another relevant education program?*

Some departments had relationships with medical or nursing schools, providing sites for clinical rotations, but none had a similar relationship with schools of public health.

24. *Does this relationship help meet the need for new staff, upgrade staff or address continuing education needs of its workers?*

No. All departments said they felt very little connection with schools of public health for workforce training or recruitment. Departments found it difficult to upgrade their staff except through distance learning or an executive MPH program that allowed employees to remain at work. Most departments felt it would be beneficial to have some sort of basic public health theory and competency training programs for all their staff, not a formal degree program, but perhaps an on-site or certificate program that would enable all staff to upgrade their skills and competencies.

Internship and clinical training opportunities were so limited within a public health setting that the next generation of PHNs and physicians and dentists are not being mentored within the system.

## **Other PH Professions**

The following occupations were listed as difficult to recruit in local public health departments, with the number of States reporting a shortage given in parentheses.

1. Epidemiologists (4)
2. Health educators (MPH level) (4)

3. Microbiologists (3)
4. Environmental scientists (2)
5. Dieticians (2)
6. Nutritionists (1)
7. Lab Directors (1)
8. Public health aids (1)
9. OT/PT (1)

## Georgia Public Health Case Study Findings

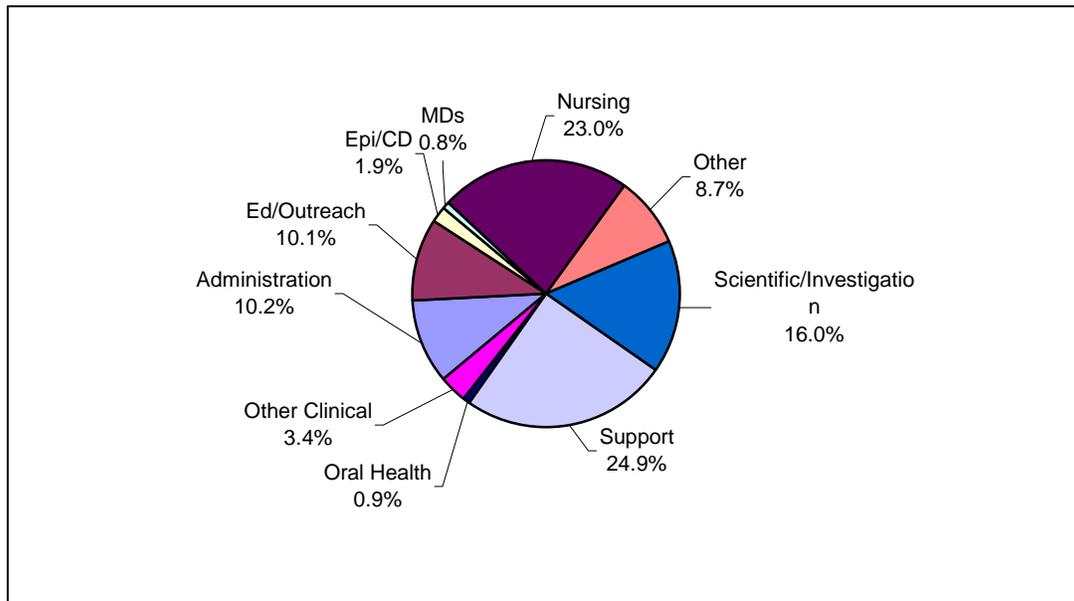
Georgia had a 2000 population of over 8 million people, and grew substantially faster (26%) between 1990 and 2000 than the U.S. as a whole (13%). Georgia's population is approximately 29% Black/African American, 5% Hispanic/Latino(a), and 2% Asian/Pacific Islander. Sixty-one percent of Georgia's population live in metropolitan areas, although 28% live in rural areas<sup>13</sup>.

### General

1. Describe the PH system model in the State (relationship between State and local health departments).

The public health system in Georgia is a collaboration between the State and its counties. Considered a 'shared model', the system includes nineteen State-run district health offices and 159 county health offices. The Division of Public Health, within Georgia's Department of Human Resources, is responsible for Georgia's governmental public health system. There are over 8,000 individuals in the public health workforce, with 85% of them at the district and local health offices.

**Figure 2. Detailed Occupational Breakdown of Public Health Workers, Georgia.**



<sup>13</sup> U.S. Bureau of the Census, 2000.

**Table 12. Public Health Workers and Workers Per Capita in State and Local Health Departments, Georgia**

	PH Workforce	Per 100,000
State	633	10
Local	7,387	90
Local urban	2,378	41
Local rural	5,009	216
Total	8,020	98

**2. Describe the district and local PH offices included in the fieldwork.**

Fieldwork in Georgia included:

- Site visits to four local health departments (one rural, two urban, and one suburban) and two district offices (one urban and one suburban);
- A district office survey of public health workforce issues -- seven district offices responded to the survey;
- A meeting with District Health Directors at the GPHA annual convention; and
- A conference call with District Nursing Directors.

**3. Describe the range of services provided at the district and local levels.**

The district and county health offices jointly provide public health services in Georgia, with the vast majority of services and responsibilities either shared by the district and county health offices or provided solely by county health offices. The basic public health services provided by district and/or local health offices are summarized below:

**Table 13. Public Health Services Provided by District or Local Health Departments, Georgia**

Services Provided by Seven Public Health Departments in Georgia	Providers		
	District Health Offices	County Health Offices	Both
Adult Immunizations	0	2	5
Animal Control	1	2	0
Behavioral/Mental Health	0	0	1
Bio-Terrorism	1	0	6
Case Management	0	3	3
Child Health	0	1	6
Chronic Disease Control	1	1	5
Comm. Disease Control	1	1	5
Community Assessment	1	2	2
Community Outreach and Education	0	0	7
Dental Health	1	1	5
Environmental Health	0	0	6
Epidemiology and Surveillance	2	0	4
Family Planning	0	1	6
HIV/AIDS Testing and Counseling	1	4	2
HIV/AIDS Treatment	2	1	4
Health Education/Risk Reduction	0	1	5
Home Health Care	0	0	0
Injury Control	1	1	4
Inspections and/or Licensing	0	4	2
Laboratory Services	0	3	2

Services Provided by Seven Public Health Departments in Georgia	Providers		
	District Health Offices	County Health Offices	Both
Maternal Health Programs	0	2	5
Obstetrical Care	0	1	0
Occupational Safety & Health	0	0	0
Prenatal Care	0	2	2
Primary Care (comprehensive)	0	2	0
Programs for Homeless	0	1	1
School Based Clinics	0	0	1
School Health	1	2	3
STD Testing and Counseling	0	2	5
STD Treatment	0	4	3
Substance Abuse Services	0	0	0
Tobacco Prevention	3	0	0
Tuberculosis Testing	0	4	3
Tuberculosis Treatment	1	2	3
Veterinarian Public Health Activities	1	0	1
Violence Prevention	0	0	4

4. *What are the most pressing recruitment and retention problems facing the PH offices studied?*

District and local health offices reported great difficulty recruiting public health nurses. They also indicated that other public health workers who were difficult to recruit included environmental health specialists, clerical workers, nutritionists, health educators, dental hygienists, dental assistants, epidemiologists, and social workers. Physicians and dentists who make up a very small part of the public health workforce can be difficult to recruit when vacancies arise, particularly in rural district and health offices.

The majority of District Nursing Directors described the PHN staffing shortages within their districts as either moderate or severe. A few characterized their shortages as a crisis and a few thought their shortages were mild. Most agreed that the current State budget deficit had aggravated the situation – hiring freezes, potential layoffs or furloughs of staff - had contributed to poor morale and may have led to increased turnover.

While district and local health offices reported good retention of their senior staff, they indicated that retention of public health workers was becoming increasingly problematic for new hires. For example, District Health Directors and District Nursing Directors reported recent problems with the retention of newly hired public health nurses who leave within three years of accepting employment. They speculated that these nurses stay in public health long enough to gain the necessary experience to secure better paying jobs.

This phenomenon of rising turnover of new hires raises concern about replacing senior staff who are expected to retire in coming years. This attrition will likely make it difficult to engage in succession planning, i.e. grooming junior staff for higher level positions in district and local health offices.

5. *Which of the following factors has the most significant impact on the recruitment and retention of public health workers at State and local health departments?*

- Budget constraints;
- Lack of qualified candidates;
- Non-competitive salaries; and
- Need for continuing professional education.

Survey respondents indicated that budget constraints were the single biggest barrier to adequate staffing. For example, vacancies in district and local health offices were likely to be either abolished or frozen, forcing district and local health offices to work short-staffed, which contributed to burn-out of remaining staff and more turnover. Another significant barrier to adequate staffing was non-competitive salaries and benefits. For example, district nursing supervisors reported that registered nurses can earn over \$10,000 - \$15,000 more in other health care settings, such as hospitals. Lack of qualified

candidates in some of the regions in Georgia was also identified as a barrier to recruitment.

*6. How do staffing patterns and workforce needs at district and local health departments vary base on rural or urban location or proximity to the US border?*

It was estimated that over 8,000 individuals worked in the public health system in Georgia in 2002, or nearly 100 workers per 100,000 population, with the vast majority of them (slightly less than 7,400) working in district or local health offices. Of the 7,400 public health workers in district and local health offices, 2,400 (41 workers per 100,000) worked in urban health settings, while 5,000 (216 workers per 100,000) worked in rural health settings.

The public health system in Georgia had over 150 occupational titles in their workforce. While there were significant differences in the number of per capita public health workers in urban and rural settings, the distribution of occupational categories within urban and rural settings was not substantially different.

- Registered nurses represented 23% of the total public health workforce in Georgia, 25% in rural settings and 20% in urban settings.
- Scientific/investigative staff represented 16% of the total public health workforce in Georgia, 17% in rural settings and 14% in urban settings.
- Epidemiologists/communicable disease staff represented 2% of the total public health workforce in Georgia, 3% in urban settings and 1% in rural settings.
- Education/outreach staff represented 10% of the total public health workforce in Georgia, 9.5% in rural settings and 11% in urban settings.
- Support personnel, including program aides, public health assistants, and support staff, represented 25% of the total public health workforce in Georgia, 25% in rural settings and 24% in urban settings.

## **Public Health Nurses**

*7. Describe the Public Health Nurse workforce, including qualifications, formal public*

Public health nurses (PHNs) in Georgia must be licensed as registered nurses in the State; there are no minimum educational requirements. Consequently, PHNs in Georgia may have completed associate degree, bachelor's degree or diploma nursing programs. PHNs who receive additional State-sponsored training can qualify as "expanded role" RNs and practice under nurse protocols. The State Nursing Office in the Georgia Division of Public Health coordinates training for PHNs to qualify them for expanded role functions. The district and local health offices surveyed reported public health nursing roles in direct patient services, population-based services and program management.

District Health Directors and District Nursing Directors estimated that it took 6 to 9 months to orient new public health nurses. The length of time varied based on prior experience and educational preparation.

In addition to public health nurses, district and local offices employed licensed practical nurses, nurse practitioners, and nurse managers.

**Table 14. PHN Roles in Georgia Public Health Departments**

<b>Topic</b>	<b>Percent of Departments</b>	<b>Average Importance (Scale 1-4)</b>
Disease Investigation	100%	3.9
Screening	100%	3.8
Case Management	100%	3.6
Medical Treatments	100%	3.6
Health Education	100%	3.4
Counseling and Advocacy for Patients	100%	3.4
Coalition Building	100%	3.4
Outreach	100%	3.4
Surveillance	100%	3.3
Program Evaluation	100%	3.3
Facility Licensing Inspectors	100%	3.3
Counseling and Advocacy for Communities	100%	3.2
Community Organizing	100%	3.1
Screening Program Development	100%	3.1
Health Education Program Development	100%	3.0
Public Policy Development	100%	2.9
Social Marketing	100%	2.7

*8a. Do district and local health offices encounter difficulty recruiting or retaining PHNs?*

District and local health offices surveyed reported an inadequate number of PHNs on staff for the services provided. They reported that vacant PHN positions were either abolished or frozen due to budget constraints. They also reported increasing difficulty recruiting qualified candidates for the PHN positions they could fill. In some instances, it took up to 24 weeks to fill a vacant PHN position.

While PHN retention had not been an issue in the past, district and local health offices surveyed reported more turnover of newly hired PHNs, who may stay up to three years and then leave public health for a variety of reasons, including better opportunities in other health care settings. Urban district and local health offices tended to experience increasing turnover as well as smaller rural offices.

*8b. If so, why?*

The reasons cited for PHN recruitment and retention difficulties included budget constraints, non-competitive wages and benefits, and a general shortage of registered nurses in Georgia, which resulted in a lack of qualified candidates. Poor working conditions, including being short-staffed, was also believed to contribute to PHN recruitment and retention problems.

*8c. How does it impact public health nurse hiring, roles, and services?*

The State Nursing Office of the Georgia Division of Public Health described two efforts to improve the PHN recruitment at district and local health offices – strategic marketing and advanced step hiring. Strategic marketing was described as a multi-pronged strategy to attract more public health nurse applicants, including:

- highlighting public health nursing as a career on the Department’s web-site: <http://www.dhrjobs.com>;
- adding maps to the website so applicants can identify the location of district and local health offices throughout the State;
- ‘continuous recruitment’ of PHNs, i.e., recruiting even when there are no vacancies in order to have a list of qualified applicants when vacancies arise;
- developing recruitment brochures; and
- attending job fairs.

Advanced step hiring entailed giving newly-hired PHNs higher starting salaries, based on education and experience.

District and local health offices surveyed indicated that shortages of PHNs had impacted on the provision of public health services, reducing hours of direct patient services or limiting opportunities for community collaboration.

*9a. What are the most pressing continuing education needs for public health nurses?*

The district and local health offices surveyed reported PHN training needs in the following areas:

- Core public health concepts, including topics such as population health, bio-terrorism and emergency preparedness.
- Clinical topics, including basic assessment, HIV counseling and testing, women’s health, STDs, tuberculosis, child health, family planning, and immunizations.
- Supervisor/manager training, including topics such as communication and negotiation, leadership, and managing change.

*9b. Are there sufficient training opportunities?*

The State Nursing Office of the Georgia Division of Public Health collaborates with five Schools of Nursing to provide an on-line course on Population Health to PHNs working in district and local health offices. The course is part of a population health competency development program that is supported by a Health Resources and Services Administration, Bureau of Health Professions, Division of Nursing Grant. The course has been designed specifically for Georgia public health nurses to enhance knowledge, skills and abilities in population health with emphasis on the following priority competencies:

- Community health assessment and diagnosis;
- Interpreting and presenting health information to local leaders, policy makers and partners;
- Using computer technology in the health planning and policy development processes; and
- Building and sustaining community coalitions.

The course is worth up to 4 undergraduate credits that can be applied to a bachelor's completion program in nursing. District Health Directors and District Nursing Directors found the course to be very relevant to the work of PHNs and felt it to be particularly helpful for those PHNs who did not have bachelor's degrees in nursing.

With the exception of the Population-Based Health course, district and local health offices surveyed reported limited training opportunities were available.

*9c. Are there adequate resources to support training opportunities?*

District and local health offices reported that financial support for PHN training was drawn from a variety of sources. State and Federal grant funds were sometimes used to provide specific training tied to grant activities. Some survey respondents reported agency training budgets. In addition to paying registration or tuition fees, PHNs might be given release time to attend training or reimbursed for the cost of travel to attend training.

*10. How many (%) public health nurses are expected to retire in the next five years?*

District Nursing Directors indicated that they expect to lose a substantial number of PHNs to retirement in the next five years. Some district offices anticipate that up to half of their most experienced PHNs will retire and given the current PHN recruitment and retention issues, they may be very difficult to replace.

## Public Health Physicians

11. Describe the physician workforce in public health, including qualifications, formal public health training requirements, and roles.

Physicians made up a small part of the public health workforce and were found in both district and local health offices. Survey respondents, representing seven districts, reported over 14 full-time equivalent (FTE) physicians either employed directly or under contract. Physicians under contract typically worked part-time, providing clinical services. District and local health offices reported physician roles included direct patient care, program planning and management and executive and administrative duties. The directors of all 19 district offices were physicians, a requirement for the position. The majority of physicians specialized in primary care, including internal medicine, family practice, pediatrics.

Six survey respondents reported one physician on staff with formal public health training; one reported no physicians with formal public health training. Public health training was a preferred qualification for district health directors, but not for any other physicians in the public health workforce. Approximately half of the current District Health Directors have formal public health training or experience. Most survey respondents indicated that formal public health training was either somewhat important or important for physicians working in their offices.

**Table 15. Physician Roles in Georgia Public Health Departments**

Topic	Percent of Respondents	Average Importance (Scale 1-4)
Facility Licensing Inspectors	14%	4.0
Medical Treatments	57%	3.5
Health Education	57%	3.5
Disease Investigation	71%	3.4
Surveillance	86%	3.3
Coalition Building	71%	3.2
Program Evaluation	71%	3.2
Screening	43%	3.0
Case Management	43%	3.0
Counseling and Advocacy for Patients	29%	3.0
Outreach	43%	3.0
Screening Program Development	71%	3.0
Public Policy Development	71%	3.0
Social Marketing	43%	3.0
Counseling and Advocacy for Communities	71%	2.8
Community Organizing	71%	2.8
Health Education Program Development	57%	2.8

*12. Do State and local health departments encounter difficulty recruiting or retaining physicians for public health jobs?*

Nearly half of survey respondents indicated that the number of budgeted public health physician positions to provide needed services was inadequate. Only one of the seven respondents reported physician vacancies, attributed to both a lack of qualified candidates and non-competitive wages and benefits. According to District Health Directors, it was easier to fill vacant physician positions than vacant PHN positions. Recruitment of physicians was more difficult in rural district and local health offices. Survey respondents indicated that it could take anywhere from 6 months to a year to fill a vacant item. Once a candidate was identified, survey respondents indicated that it could take another 2 to 3 months to hire the physician.

*13a. What are the most pressing continuing education training needs for physicians in public health jobs?*

The most pressing continuing education needs identified included topics such as bio-terrorism, population health, emerging infectious disease, HIV, tuberculosis, STDs and computer skills training.

*13b. Are there sufficient training opportunities?*

Respondents indicated that there were sufficient training opportunities for bio-terrorism and most clinical topics, but few opportunities for training in population health and computer skills.

*13c. Are there adequate resources to support training opportunities?*

Multiple sources of support for continuing education were identified, including agency training budgets as well as Federal, State, and local grants. However, resources generally have diminished in recent years due to governmental budget constraints.

*14. How many (%) physicians in public health jobs are expected to retire in the next five years?*

While more than half of survey respondents expected some of their physicians to retire within the next five years, this did not appear to be a pressing issue for either district or local health offices. However, as indicated previously, offices located in rural areas of the State encountered more difficulty finding qualified candidates to fill vacant positions.

## **The Oral Health Workforce in Public Health**

*15. Describe the oral health workforce in public health, including qualifications, formal public health training requirements, and roles.*

Georgia's oral public health program is focused on prevention, secondary, and tertiary treatment for school-aged children, especially those who are disadvantaged. Ten of the district health offices used mobile dental trailers and vans to provide a school-based oral

prevention program. Oral health clinics were available to children in thirty-six of Georgia's counties. With mandatory fluoridation in Georgia, nearly 93% of the State's population has access to fluoridated water. Oral health staff in each of the 19 district offices included a dental director and a dental hygienist. In total, there are 59 oral health personnel employed in State, district and local health offices.

Two of the 59 oral health personnel had formal public health training: the State Dental Director and one dental hygienist. Although formal public health training was not required for oral health personnel, most district and local health office survey respondents indicated that public health training for oral health workforce staff was either somewhat important or important.

*16. Do State and local health departments encounter difficulty recruiting or retaining oral health workers?*

While there was substantial need for oral health services, funding for services was identified as a major constraint. There are not enough staff to provide all the core dental health services needed, regardless of the number of reported oral health vacancies.

A small number of vacancies for oral health staff were reported and attributed to non-competitive wages and benefits.

*17a. What are the most pressing continuing education training needs for oral health staff?*

Public health training was identified as one of the most pressing continuing education needs.

*17b. Are there sufficient training opportunities?*

Oral health staff have sufficient clinical training opportunities, but public health training opportunities are not readily available.

*17c. Are there adequate resources to support training opportunities?*

State and local budget constraints has diminished the resources available to support training for oral health staff.

## **MPHs in Public Health**

*18. Do local and State health departments employ MPHs or encourage existing staff to obtain MPHs or other formal public health training?*

Most district and local health offices reported few staff with a MPH or other formal public health training. District directors were unconvinced of the value of and need for MPHs in district and local health offices. They did, however, report a need for training their existing staff in core public health concepts.

*19. What roles do MPHs or of individuals with formal public health training play in local and State health departments?*

Staff with formal public health training served in executive leadership roles as well as in program planning positions. Responsibilities of staff with MPHs or with formal public health training included surveillance, assessment, epidemiology, program planning, or management/leadership positions.

*20. Is an MPH required for leadership positions in local and State health departments?*

Formal public health training or experience was a preferred qualification for district office directors; approximately half of district directors met the requirement.

*21. Do local and State health departments experience difficulty recruitment or retaining MPHs?*

Given limited demand, recruitment and retention issues were difficult to assess. According to district office directors, individuals in their workforce who obtain MPHs usually leave the agency for better positions.

## **Collaborations**

*22. Do local or State health departments have a relationship with a school of public health or an MPH program, a school of nursing, or a school of medicine/dentistry or another relevant education program?*

Only one district health office reported a successful relationship with a school of public health. Most of the other district and local health offices reported relationships with schools of nursing and schools of medicine and dentistry.

*23. Does this relationship help meet the need for new staff, upgrade staff, or address continuing education needs of its workers?*

District and local health offices reported recruiting new graduates of nursing programs where students completed clinical training with them. Limited opportunities were reported for existing PHNs to complete BSNs. While there was general consensus on the importance of encouraging staff to further their education, they reported a need for programs designed for people who work and ones that use technology such as distance learning to make programs accessible for workers in rural areas.

## Montana Public Health Case Study Findings

Montana had a 2000 population of 900,000 people, 46% of which lived in rural areas. Population density in Montana is strikingly low at 6 persons per square mile. The largest minority group in Montana is American Indian/Alaska Natives, who constitute 6% of the population. Poverty in Montana is somewhat higher than the national rate (15% versus 12%).<sup>14</sup>

### General

#### *1. Describe the PH system model in the State (relationship between State and local health departments).*

Montana's public health system is administratively decentralized. Each county is required by State law to have a board of health and a health officer who is an MD, an MPH or an equivalent. The counties carry out these requirements in a variety of ways. The more populous counties have extensive health departments with a very broad range of services. The smaller counties may have only part time health departments, and one county is considering dropping its health department altogether. While the authority for public health in Montana sits in the counties, the State has great influence over the counties by virtue of the funding that passes through the State to the counties. At the same time, the State works hard to support local health departments through the provision of training and direct consultation, further increasing its influence in the local health departments.

#### *2. Describe range of services provided at local and State level.*

The State of Montana provides a full range of public health services. Despite being a sparsely populated State, both the State and local health departments take responsibility for providing services. A review of the organization chart of the Department of Public Health and Human Services lists over 80 specific services or functions. Some of these services are carried out at the State level, but most are at the local level. Much of the State's funding for public health services comes from Federal block grants or grants aimed at specific services. This often puts the State in the position of contract manager, broker, consultant and trainer.

The table below lists the full range of public health services offered in the State of Montana and which of them were offered in the counties included in the case study. Because of budget constraints, the smaller counties did not offer all services. While a county with a community health center (CHC) can offer a full range of primary care health services through the CHC, most smaller counties relied on the local primary care providers for those services. While each county was interested in communicable diseases, most turned to the State when an outbreak occurred for help with epidemiology.

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<sup>14</sup> U.S. Bureau of the Census, 2000.

Local officials reported that sometimes the State was overly prescriptive in their requirements for implementing Federal programs whose funding comes through the State for work done at the local level, e.g., but still the work got done.

*3 Describe the State and local PH offices included in the field work. (#, size, location, urban/rural, border and workforce composition)*

Five local health departments (LHDs) in Montana were visited. The Rural/Urban Commuting Areas (RUCAs) developed by the WWAMI Rural Health Research Center (RHRC) were used to assure that a variety of counties were visited. See the RHRC web page for details on RUCAs (<http://www.fammed.washington.edu/wwamirhrc/>). All of the LHDs visited were in a single agricultural part of Montana made up of about 8 counties.

The location of each visited LHD may be described as follows:

- LHD#1 (Census tract strongly tied to urban core): A county dominated by one of Montana's larger cities.
- LHD#2 (Census tract weakly tied to large town): A rural county near Great Falls supported by agriculture and tourism and commuting ties to a large city. GC-town is the county seat.
- LHD#3 (Small town census tract): A county that is dependent on agriculture and the transportation industries. IB-town is the county seat.
- LHD#4 (Census tract strongly tied to small town): An agriculture and transportation dependent county that sits at the crossroads of two major highways. T-town is the county seat.
- LHD#5 (Census tract weakly tied to small town): One of Montana's smallest and least populous counties supported by dry land farming agriculture. D-town is the county seat.

These counties represent a diverse group of RUCAs and are all located in one part of a much larger and diverse State.

**Table 16. Services provided by five Montana local health departments**

Services provided by five Montana local health departments						
	DB County	GC County	I County	U County	M County	Total Percent
Adult Immunizations	1	1	1	1	1	100%
Communicable Disease Control	1	1	1	1	1	100%
Health Education/Risk Reduction	1	1	1	1	1	100%
Maternal Health Programs	1	1	1	1	1	100%
Tobacco Prevention	1	1	1	1		80%
Tuberculosis Testing	1	1	1	1		80%
Bioterrorism	1	1	1	1	1	100%
Child Health	1		1		1	60%
Community Assessment	1	1	1			60%
Community Outreach and Education	1		1		1	60%
Dental Health	1		1	1		60%
Environmental Health	1		1	1		60%
Family Planning		1	1	1		60%
School Based Clinics		1	1		1	60%
School Health	1		1		1	60%
Chronic Disease Control	1		1			40%
Epidemiology and Surveillance	1		1			40%
HIV/AIDS Testing and Counseling	1		1			40%
Injury Control	1		1			40%
Inspections and/or Licensing	1		1			40%
STD Testing and Counseling	1		1			40%
STD Treatment	1		1			40%
Tuberculosis Treatment	1		1			40%
Violence Prevention	1			1		40%
Animal Control			1			20%
Behavioral/Mental Health			1			20%
Case Management			1			20%
HIV/AIDS Treatment	1					20%
Home Health Care			1			20%
Occupational Safety and Health			1			20%
Prenatal Care					1	20%
Primary Care (Comprehensive)	1					20%
Laboratory Services						0%
Obstetrical Care						0%
Programs for Screening and Treating the Homeless						0%
Substance Abuse Services						0%
Veterinarian Public Health Activities						0%
<b>Totals</b>	<b>24</b>	<b>10</b>	<b>28</b>	<b>11</b>	<b>10</b>	

*4a. What are the most pressing recruitment and retention problems facing the PH offices studied?*

The most pressing workforce issue in the LHDs visited related to the overall small size of the Montana workforce in all industries and the generalized workforce shortages in the State. These diseconomies of scale meant that there were not very many of any workforce category, which made health departments vulnerable to attrition, i.e., workers retiring, leaving the workforce or leaving the State. The small size of the workforce also meant that there was no attempt, in four of the five LHDs visited, to even try to recruit and hire physicians, dentists, or MPHs to the public health workforce. The scale prohibited having these workers on staff, so LHDs were forced to find help in these arenas via volunteer efforts by local professionals in the private sector and through partnerships with and consultation from the State. The diseconomies of scale also made training and continuing education difficult to provide.

Only one of the LHDs visited had any openings for nurses, physicians, dentists or MPHs: a vacancy for a part-time public health nurse to work in a very small setting in a remote town.

*4b. Do State and local health departments encounter difficulty recruiting or retaining RNs, physicians, dentists or MPHs?*

There were very few physicians, dentists and MPHs in the Montana public health workforce. There simply was not the volume of service to support their employment. The physicians and dentists in the public health workforce were almost exclusively engaged in clinical care as part of the safety net providing services to the most needy in the State. MPHs were found in the State health department and in some of the more populous counties. Very few positions in the State required an MPH since it was too impractical to require a credential that so few hold.

Public health nurses were the backbone of the public health workforce in Montana and, while four of the five sites (plus the State) indicated they did not have openings, they all appreciated the precariousness of the public health nursing workforce. With the exception of one county and its attempts to recruit its one-person public health workforce, none of the other agencies reported current difficulties recruiting and retaining nurses.

*5 Which of the following has the most significant impact on the recruitment and retention of PH workers at State and local health departments?*

Each of the factors below, ranked in order of importance from high to low as Stated by State officials, had impact on maintaining the public health workforce in Montana.

- Lack of qualified candidates – This was true across most industries in Montana
- Need for continuing professional education – While the State emphasized education and devoted significant resources to it, they still believed they had a long way to go toward having a fully trained public health workforce.

- Budget constraints – Always an issue in a low population State with diseconomies of scale.
- Non-competitive salaries – Most public health workers (especially at the county level) can make more money in the private sector or at least in the health services sector, public or private.

6. *How do staffing patterns and workforce needs at State and local health departments vary based on rural, urban location or proximity to a US border?*

In this State, there were few urban areas and those areas tended to have fewer than 100,000 people. In the rural areas, the scale diminished rapidly with many Montanans living in very small communities. The urban areas had an easier time of staffing but they were in competition with the health services arena. In the rural areas, there were virtually no public health physicians, dentists or masters degree trained professionals. The nurses and support staff in the rural areas must be willing to work with very little support (or supervision) and less budget.

### **Public Health Nurses (PHNs)**

7. *Describe the PHN workforce, including qualifications, formal public health training requirements, and roles.*

Qualifications for PHNs: Montana had no State laws about credentials for public health nurses. There was no formal State director of public health nursing.

Formal PH Training Requirements: While there were no training requirements for PHNs, the local health departments and the State emphasized this issue at the present time. Some training collaborations occur between local and State health departments and schools of public health. (See section below on training.)

Roles: Since there were not many other types of public health professionals, public health nurses worked in each of the ten essential services areas in public health in Montana. Some masters prepared nurses were lead public health officials in larger counties, and the nurses in the smaller counties did virtually everything. The smallest county visited staffed its health department with one PHN and a one-day-per-month contract sanitarian<sup>15</sup>. The table below lists the roles that nurses played in the counties visited. The information on roles came from the LHDs survey. A number in a box means that the PHNs play that role and the numbers range from 1 (not important) to 4 (very important.)

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<sup>15</sup> Sanitarians enforce the provisions of public health laws relating to environmental health, sanitation, and safety. Their roles may include the development of environmental standards, the performance of inspections, and the education of the public, as well as correction of violations and training of health personnel.

**Table 17. Roles Played by Montana PHNs and Importance of Roles Ranked 1 (Not Important) to 4 (Very Important)**

<b>Topic</b>	<b>Percent of Departments</b>	<b>Average Importance (Scale 1-4)</b>
Health Education	100%	4.00
Disease Investigation	80%	2.67
Screening	80%	3.75
Community Organizing	80%	3.25
Counseling and Advocacy for Communities	80%	3.25
Health Education Program Development	80%	3.75
Surveillance	80%	3.75
Counseling and Advocacy for Patients	60%	3.33
Public Policy Development	60%	2.67
Case Management	40%	4.00
Medical Treatments	40%	4.00
Program Evaluation	40%	3.00
Coalition Building	40%	3.50
Social Marketing	40%	3.00
Outreach	20%	3.00
Program Planning and Management	20%	2.00
Executive Administration	20%	3.00
Facility Licensing Inspectors	20%	1.00

*8a. Do State and local health departments encounter difficulty recruiting or retaining PHNs?*

While informants said that recruiting and retaining PHNs was difficult, only one of the LHDs currently had an opening. Still, they all saw it either as a problem or looming danger.

*8b. If so, why?*

The issue appeared to be about recruiting and retaining qualified candidates. That is, LHDs are able to fill vacant items, but at the same time are concerned that they do not have adequately trained people for the jobs.

State officials reported that PHNs are increasingly at odds with boards of health on policy issues. Conflicts ranged from disagreements about water fluoridation to differing opinions on the essential functions of a LHD. This can be demoralizing to a workforce that tends to already be overworked and underpaid.

Some PHNs entered the field to be part of the clinical care safety net, providing personal health services, and have been asked to move away from that role in favor of population-based approaches to public health.

*8c. How does it impact PHN hiring, roles, services?*

A key impact was that the role of the PHN in any setting will depend on experience, training and willingness to take on specific roles.

*9a. What are the most pressing continuing education training needs for PHNs?*

The training needs most commonly mentioned by survey respondents were communicable diseases (75% of survey completers); immunizations (75%); MCH (50%); program evaluation and quality assurance (50%); family planning (50%); role of the PHN (25%); chronic disease (25%); policy and law (25%); and school based programs (25%). In addition, all of the counties visited received bio-terrorism funding and anticipate training needs in that area.

*9b. Are there sufficient training opportunities?*

See section below on training.

*9c. Are there adequate resources to support training opportunities?*

See section below on training.

*10. How many (%) PHNs are expected to retire in the next five years?*

Retirement was currently not an issue on the radar screens of the informants. The LHD workforce was small in aggregate, and only one of the sites predicted a retirement in the next five years. Nurses were much more likely to leave the workforce for reasons such as burnout or political difficulties between PHNs and local boards of health.

## **Public Health Physicians**

*11. Describe the physician workforce in public health, including qualifications, formal public health training requirements, and roles.*

Qualifications: Each county in Montana must have a board of health and a health officer who is an MD, MPH, or someone with similar training. Non-MDs or MPHs must get approval from the State in order to serve as the health officer. At the State level, only the State health officer must be a physician and that person is not required to have formal public health training.

Formal public health training: Beyond having an MD degree, physicians in the Montana public health workforce (at the State and county levels) were not required to have formal public training. Some physicians in State positions had such training, but none of the local physicians were formally trained in population health. While the State health

officer would like to see this change, increasing training requirements would have a fiscal impact that the State cannot currently afford.

Roles: There were basically three places to find physicians in the Montana public health workforce: State positions, LHD health officers, direct patient care providers in CHCs owned by LHDs. (Indian Health Services and Tribal Health Departments employ physicians but that was beyond the scope of this project.) Physicians in State positions and at CHCs were usually employed full-time. The physicians who served as health officers in the LHDs were rarely employed full-time. In some instances, the CHC physician also served as the county health officer and tended to play a minor role in population health. While State statutes would suggest larger roles for physicians in public health, few physicians in public health in Montana were concentrating on the roles and responsibilities of being a health officer. The non-urban counties typically had a local physician in the health officer role but his or her involvement with the LHD was typically minimal with an emphasis on providing medical (not population health) advice to boards of health and the local public health workforce. These part-time health officers tended to draw a nominal stipend from the county (\$500 to \$1,000 per year) to assure that the county was in compliance with the requirement to have a physician health officer.

*12a. Do State and local health departments encounter difficulty recruiting or retaining physicians for PH jobs?*

Only one LHD in the case study employed physicians and used them exclusively in their city/county CHC. The director had been successful in recruiting one and did not see this as a challenge at this time.

*12b. If so, why?*

NA

*12c. How does it impact on physician hiring, roles, services?*

NA

*13a. What are the most pressing continuing education training needs for physicians in public health jobs?*

According to the State health officer, the physicians in the public health workforce have no formal public health training requirements. Many, however, have gotten training on their own or via personal continuing education efforts. In some instances, local health officers demonstrated strong personal interests in population health even though they were not required to play that role. Some primary care physicians used processes like Community Oriented Primary Care in their practices, especially those in rural settings. Montana's physician public health workforce showed great variation in terms of training and experience. Some places were better covered than others, with many places benefiting from physicians providing support for public health, often through personal

interest and funded out of their own pocket. Lack of financial resources locally and at the State level precluded a more formal system.

*13b. Are there sufficient training opportunities?*

The State worked to provide opportunities. See the education section below.

*13c. Are there adequate resources to support training opportunities?*

See section below.

*14. How many (%) physicians in public health jobs are expected to retire in the next five years?*

This was not a public health workforce issue in Montana.

## **The Oral Health Workforce in Public Health**

*15. Describe the oral health workforce in public health, including qualifications, formal public health training requirements, and roles.*

Montana's oral health workforce included a handful of dentists employed in CHCs (five for the entire State by one recent estimate). In the LHDs, PHNs took on oral health issues and volunteer dentists participated in oral health initiatives at the local level. The CHC dentists worked strictly in the health services arena. They faced insurmountable demand for care and consequently had no time for population health. A number of LHDs had oral health programs run by non-dental professional staff. One county, for example, engaged volunteer local dentists in a yearly surveillance project where they conducted oral examinations on elementary-school kids for case finding. Dentist support of the oral health safety net varied by community. Some dentists provided free care while others would not see Medicaid recipients and had little else to do with bolstering the safety net.

The new president of the State dental association was a National Health Service Corps alumnus. He was very interested in population health and highly supportive of the State's efforts in dental population health.

**Qualifications:** Dentists working in public health at any level are only required to have a valid State DDS or DMD license. The director of the State's oral health program was a dental hygienist.

**Formal Public Health Training:** Not required of the dentists currently working in public health in Montana.

**Roles:** See above.

*16a. Do State and local health departments encounter difficulty recruiting or retaining oral health workers?*

While there was a generalized shortage of dentists in Montana, recruiting for the small number employed in public health was not a major concern at this time. The State recently re-opened a school of dental hygiene, hoping that it would benefit efforts in population oral health.

*16b. If so, why?*

NA

*16c. How does it impact hiring, roles, services?*

NA

*17a. What are the most pressing continuing education training needs for oral health staff?*

NA

*17b. Are there sufficient training opportunities?*

See training section below.

*17c. Are there adequate resources to support training opportunities?*

See below.

*18. How many (%) oral health staff are expected to retire in the next five years?*

Not an issue at this time. This is a huge issue in the overall dental workforce in Montana.

## **MPHs in Public Health**

*19. Do local and State health departments employ MPHs or encourage existing staff to obtain MPHs or other formal public health training?*

There were a small number of MPHs in Montana: about 10 at the State level and an unknown number at the local level. This training was not always required for a position, but everyone interviewed recognized the value of such training. Given the small size of the public health workforce and given the statutory requirements faced by the LHDs, individuals with clinical training were more valuable than individuals with general public health training only. A number of State officials reported obtaining MPHs through distance learning opportunities.

*20. What roles do MPHs play in local and State health departments?*

MPHs at the State level were typically in leadership and policy positions. At the LHD level, an individual with an MPH was eligible to be a health officer. Some MPH staff worked in program manager positions at the local and State level.

*21. Is an MPH required for leadership positions in local and State health departments?*

No.

*22. Do local and State health departments experience difficulty recruiting or retaining MPHs?*

Yes. The supply was very small and it is unusual for an out-of-State person with an MPH to seek employment in Montana. More commonly, a State official will recognize the need for such training and seek the training while continuing to work.

### **Collaborations for Training**

*23. Do local or State health departments have a relationship with a school of public health or an MPH program, a school of nursing, or a school of medicine/ dentistry or another relevant education program?*

Montana worked closely with the Northwest Center for Public Health Practice (NWCPHP) in the School of Public Health at the University of Washington. For the last two summers, the NWCPHP has coordinated with the Montana Department of Health and Human Services to conduct a weeklong public health training institute. Faculty were drawn from the NWCPHP as well as from the public health ranks in Montana, both at the State and local levels. The State worked hard to encourage LHDs to send staff to the institute and offered scholarships to LHD staff to make the training more affordable. In June of 2003, the institute drew 125 participants (out of a total Montana public health workforce of about 900.) It is important to note that the main audience for the Institute was typically nurses, health educators, lead public health officials, and health officers. Few physicians and to date, no dentists have attended.

The State Department of Health also worked with the University of Washington on the National Turning Point Project. This initiative provided support to the State and local based public health workforce.

The State's oral health program is planning to bring together the dentists in CHCs and in Indian Health Service clinics for training on population health issues.

A number of State public health officials have gotten advanced training through the Extended Degree Program at the School of Public Health at the University of Washington; a key training asset for Montana.

*24. Does this relationship help meet the need for new staff, upgrade staff or address continuing education needs of its workers?*

Yes. All involved with the relationship between the NWCPHP and the State of Montana spoke in praise of it. The Institute and the Turning Point project made a difference but there is much more to be done. While public health training was being provided and was

available to all LHDs, the barriers of time and money were still substantial. Consequently, the LHDs still listed training as a major need.

### **Other PH Professions**

The only other public health professionals commonly mentioned were sanitarians that each county was required to employ. Recruiting and retention in this area was not a big problem.

## New Mexico PH Case Study Findings

New Mexico had a 2000 population of nearly 2 million people, and grew substantially faster (20%) between 1990 and 2000 than the U.S. as a whole (13%). New Mexico’s population is approximately 42% Hispanic/Latino(a), and 10% Native American/Alaska Native. Forty-seven percent of New Mexico’s population live in metropolitan areas, although 25% live in rural areas. New Mexico has a strikingly high level of poverty compared to the U.S. as a whole (18% versus 12%).<sup>16</sup>

### General

1. *Describe the public health system model in the State, i.e., the relationship between State, district, and local health departments.*

The public health system in New Mexico is a wholly State-run system. Considered a ‘centralized model’, the system includes 4 district health offices and 54 local health offices serving New Mexico’s 33 counties. The Public Health Division of the New Mexico Department of Health is responsible for New Mexico’s public health system. There were over 1,100 individuals in the State public health workforce in 2003.

The four district offices oversee the 54 local health offices. Each district office has a director, a medical officer and at least one nursing director. District and local health offices provide most of the public health services in New Mexico.

**Table 18. Public Health Workers and Workers Per Capita in State and Local Health Departments, New Mexico**

	PH Workforce	Per 100,000 Pop
<b>State</b>	388	21
<b>Local</b>	721	40
Local urban	216	16
Local rural	505	111
<b>Total</b>	<b>1,109</b>	<b>61</b>

2. *Describe the State, district, and local public health offices included in the fieldwork.*

Fieldwork in New Mexico included:

- A survey of the four district offices on public health recruitment and retention issues;
- A conference call with district and local nursing directors;

<sup>16</sup> U.S. Bureau of the Census, 2000.

- A meeting with district directors and medical directors; and
- A series of meetings with State central office public health staff, including the directors of dental services, social work services and the WIC program.

3. *Describe range of services provided at local and State level.*

The district and county health offices jointly provide the majority of public health services in New Mexico, with either one or the other providing the service or sharing responsibility for providing the service. In general, local health offices were more likely to provide clinically oriented services, while district offices were more likely to focus on population-based health services, although health promotion staff (5 – 9 in each District) provided population-based services. Program administration responsibilities were usually shared by the district offices and the State central office.

The basic public health services are provided by the State central office, district offices and county health offices. Services provided by either the district or local health offices are summarized below:

**Table 19. Services Provided by State, District, and Local Public Health Departments in New Mexico**

Public Health Service	Provider			
	State Program	District Health Offices	Local Health Offices	All
Adult Immunizations				√
Animal Control				
Behavioral/Mental Health	√		√	
Bio-Terrorism				√
Case Management				√
Child Health				√
Childhood Immunizations				√
Chronic Disease Control				√
Community Disease Control				√
Community Assessment				√
Community Development				√
Community Outreach and Education				√
Dental Health	√	√		
Environmental Health				√
Epidemiology and Surveillance				√
Family Planning				√
HIV/AIDS Testing and Counseling				√
HIV/AIDS Treatment				√
Health Education/Risk Reduction				√
Home Health Care			√	
Injury Control				√
Inspections and/or Licensing (Health Professions)	√			
Laboratory Services				√
Maternal Health Programs				√
Needle Exchange				√
Obstetrical Care				
Occupational Safety & Health				
Prenatal Care			√	
Primary Care (Comprehensive)				
Programs for Screening and Treating Homeless	√			
School-Based Clinics				√
School Health				√
STD Testing and Counseling				√
STD Treatment				√
Substance Abuse Services	√			
Tobacco Prevention				√
Tuberculosis Testing				√
Tuberculosis Treatment				√
Veterinarian Public Health Activities	√			
Violence Prevention				√

4. *What are the most pressing recruitment and retention problems facing the PH offices studied?*

Generally, respondents reported the most difficulty recruiting public health nurses. In addition, other occupations that posed substantial recruitment difficulty included: nutritionists/dietitians, social workers, health educators, clerical staff, epidemiologists, dental hygienists and dental assistants. The recruitment and retention of bi-lingual public health workers was a major problem for the health offices serving border counties in New Mexico.

While physicians and dentists comprised a very small part of the public health workforce, vacancies could be difficult to fill, particularly for positions in the more remote areas of the State. However, once hired, they tended to stay.

District directors and nursing directors expressed concern about the aging of their public health nursing workforce and anticipated an increasing number of retirements of their more senior and experienced public health nurses.

5. *Which of the following factors has the most significant impact on the recruitment and retention of public health workers at district, and county public health offices?*

- Budget constraints;
- Lack of qualified candidates;
- Non-competitive salaries – pay less in PH than anywhere else in the system;
- Recently expanded services or programs;
- Lengthy State hire process; and
- Need for bilingual/culturally competent staff.

The reason most often cited for recruitment and retention difficulties was lack of competitive wages. Competition for registered nurses from bordering States, where pay was substantially higher, exacerbated the problem with public health nurses. Other barriers to adequate staffing that were identified included lengthy processing time for new hires and finding qualified candidates in some areas of the State.<sup>6</sup>

*How do staffing patterns and workforce needs at district and local health departments vary based on rural, urban location or proximity to a US border?*

There were over 1,100 working in the public health system in New Mexico in 2003, or 61 per 100,000, with the majority of them (721) working in district or local health offices. Of the 721 local public health workers, 216 worked in an urban area of the State, or 16 workers per 100,000, and 505 worked in a rural area of the State, or 40 workers per 100,000.

The public health system in New Mexico used over fifty occupational titles in their workforce. While there were significant differences in the number of per capita public

health workers in urban and rural areas of New Mexico, the distribution of occupational categories within urban and rural settings was not substantially different.

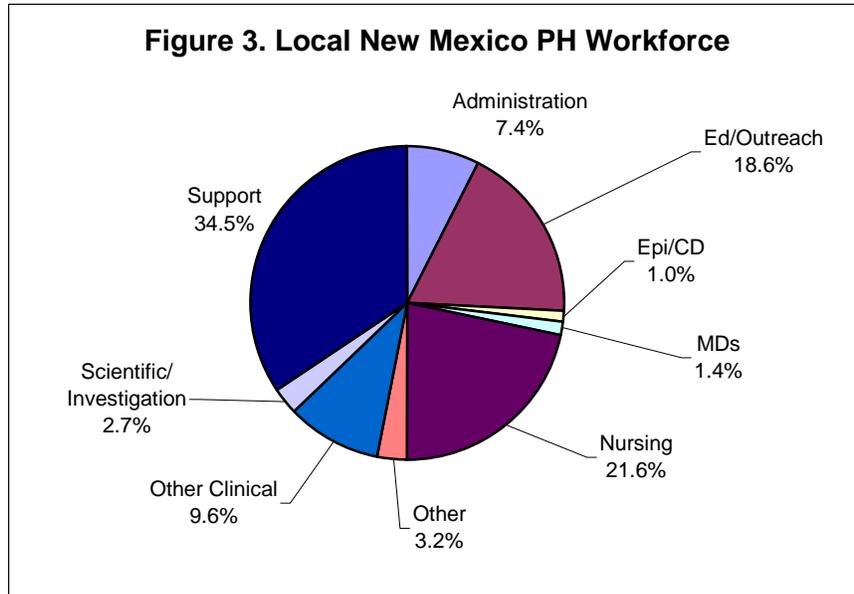
- Registered nurses represented 22% of the local public health workforce in New Mexico, 24% in urban areas and 21% in rural areas.
- Scientific/investigative staff represented nearly 3% of the local public health workforce in New Mexico, 4% in urban areas and 2% in rural areas.
- Epidemiologists/communicable disease staff represented 1% of the local public health workforce, slightly over 1% in urban areas and slightly under 1% in rural areas.
- Education/outreach staff represented 19% of the local public health workforce, 22% in urban areas and 17% in rural areas.
- Support personnel, including program aides, public health assistants, and support staff represented nearly 35% of the local public health workforce, 29% in urban areas and 37% in rural areas.

### ***Public Health Nurses***

#### *7. Describe the PHN workforce, including qualifications, formal public health training requirements, and roles.*

Public health nurses (PHNs) must be licensed as registered nurses in the State of New Mexico. There are no minimum educational requirements for PHNs in New Mexico who may have associates or bachelors nursing degrees or nursing diplomas. A bachelor's degree in nursing is a preferred qualification for PHNs who work as managers or district nursing directors in New Mexico. There are no PHN requirements for formal public health training.

District nursing directors estimated that it took 6 months to a year to orient new public health nurses. The length of time varied based on prior experience and educational preparation.



The career ladder in public health nursing is based on years of experience rather than advanced education. According to district nursing directors, this creates a disincentive for PHNs to pursue an advanced degree (e.g., a bachelor's in nursing or master's in public health), since furthering their education will not automatically lead to a promotion. In addition, the career ladder in public health nursing is also constrained by availability of positions. With a limited number of nursing titles (general nurse, nurse manager and director of nursing) and positions, advancement opportunities often require relocation or very long commutes.

PHNs who worked in local health offices generally provided direct patient care, with some program planning and management responsibilities. PHNs who worked in district offices tended to play a greater role in program planning and management of public health services as well as supervising local health office staff.

**Table 20. PHN Roles in New Mexico Public Health Departments**

Topic	Percent of Respondents	Average Importance (Scale 1-4)
Disease Investigation	100%	3.86
Health Education	100%	3.71
Screening	100%	3.71
Counseling and Advocacy for Patients	88%	3.71
Medical Treatments	75%	3.67
Outreach	88%	3.67
Case Management	100%	3.57
Surveillance	100%	3.29
Program Evaluation	100%	3.29
Office Management	100%	3.14
Health Education Program Development	100%	3.00
Public Policy Development	100%	3.00
Community Organizing	100%	2.85
Counseling and Advocacy for Communities	100%	2.85
Coalition Building	100%	2.85
Supervision	100%	2.85
Social Marketing	75%	2.83
Screening Program Development	100%	2.71

*8a. Do district and local health departments encounter difficulty recruiting or retaining PHNs?*

District nursing directors reported increasing difficulty recruiting PHNs. They reported district-wide PHN vacancy rates that ranged from 10-24%. Retention of PHNs was also identified as a growing concern. Survey respondents indicated the PHN turnover rate in district and local health offices was approximately 20%, with 17% of those leaving due to retirement. District nursing directors reported increasing turnover of new hires, attributed to non-competitive salaries and concerns about adequate staffing.

*8b. If so, why?*

The primary reason cited for PHN recruitment difficulty and increasing problems with retention was non-competitive salaries. There was general consensus that PHN salaries lagged behind other health care providers, particularly hospitals, and the general shortage of registered nurses in New Mexico may have widened the salary gap. Another contributing factor was lengthy processing time for new hires, which could range from 5 to 12 weeks. District nursing directors reported losing candidates, who were waiting to be appointed, to better opportunities. Budget constraints was also a factor and, in some instances, vacant items were either subject to a hiring freeze or abolished.

*8c. How does it impact PHN hiring, roles, services?*

District nursing directors reported that they didn't have enough PHNs to provide needed services. In some instances direct patient services were cut back, such as reducing clinic hours or the number of maternal-child health consultations. In other instances, population-based services were reduced. There was less time for senior PHNs to provide supervision and mentoring to younger nurses.

In an effort to address the issue of non-competitive salaries, PHNs in New Mexico are eligible to receive higher starting salaries (i.e., 'in-grade hires'), based on training and experience. To address concerns about the increasing number of PHN retirements, New Mexico recently passed a law that will allow State retirees to return to their position in three months, while still collecting their pension.

*9a. What are the most pressing continuing education training needs for PHNs?*

The most pressing continuing education needs identified for PHNs were in the following areas:

- **Core public health concepts**, including topics such as fundamentals of public health<sup>17</sup> for nurses; population-based health; epidemiology for PHNs; emergency preparedness and response; and bio-terrorism.
  - **Clinical topics**, including sexually transmitted diseases; contraceptives; reproductive health; immunizations; and case management.
  - **Supervisor/manager training**, including critical thinking and supervisory skills.

*9b. Are there sufficient training opportunities?*

Survey respondents indicated that training on clinical topics was readily available but it was much harder to find supervisor/manager training as well as training on core public health topics for PHNs.

*9c. Are there adequate resources to support training opportunities?*

Respondents indicated that agency training funds and Federal grants were used to support continuing education and training for PHNs.

*10. How many (%) PHNs are expected to retire in the next five years?*

District health offices expect that, at a minimum, 35-45% the PHN workforce (including district and local health offices) is expected to retire within the next five years.

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<sup>17</sup> The Public Health Division of New Mexico's Department of Health offers a day and a half "Orientation to Public Health" that is available to all new State, district or local health office employees. Survey respondents indicated that there is unmet need for PHN-specific training on core public health concepts.

## **Public Health Physicians**

*11. Describe the physician workforce in public health, including qualifications, formal public health training requirements, and roles.*

Physicians make up a small part of the public health workforce in New Mexico, usually working in district or local health offices. Physician roles include direct patient care as well as epidemiology, program planning, management and administration duties. Each of the four district health offices has a health officer. Formal public health training is a preferred qualification for the health officer position, but not for other physician positions.

*12. Do State and local health departments encounter difficulty recruiting or retaining physicians for PH jobs?*

District health offices indicated that qualified physicians were difficult to recruit due to non-competitive salary and benefits, but when a physician was hired, they tended to stay.

*13. What are the most pressing continuing education training needs for physicians in public health jobs?*

The most pressing continuing education needs for public health physicians included core public health concepts, such as epidemiology; risk assessment, emerging infectious diseases, and emergency preparedness as well as clinical topics such as tuberculosis; sexually transmitted diseases; family planning and prenatal care.

*14. Are there sufficient training opportunities?*

Respondents indicated that the public health oriented training for physicians was not as readily available as training on clinical topics.

*15. Are there adequate resources to support training opportunities?*

District health offices reported agency training funds and Federal grants to support training.

*16. How many (%) physicians in public health jobs are expected to retire in the next five years?*

While districts anticipated some physician retirements within the next five years, it was not viewed as problematic.

## **The Oral Health Workforce in Public Health**

*17. Describe the oral health workforce in public health, including qualifications, formal public health training requirements, and roles.*

New Mexico's public health dental program operates out of the central office and provides sealants to low-income 2<sup>nd</sup> and 3<sup>rd</sup> grade students as well as a number of oral health education initiatives and screening programs. The State dental office included two dentists, (one is the State Dental Director), two dental hygienists, and five dental assistants, as well as three staff who work in the district offices. While the Dental Director had formal public health training, the qualifications for the dental director position were recently modified and formal public health education became a preferred qualification rather than a requirement. Formal public health training was not a requirement for any of the other oral health staff.

*18. Does the State health department encounter difficulty recruiting or retaining oral health workers?*

Both dental hygienists and dental assistants were very difficult to recruit. According to the State Dental Director, it took up to twelve months to recruit a dental hygienist and up to three months to recruit a dental assistant. At the time of the survey, there were vacancies for both dental hygienists and dental assistants. The two reasons cited for the recruitment difficulties were lack of qualified candidates and non-competitive pay. In addition, dental assistants posed retention difficulties as well. It was not uncommon to hire a dental assistant into the public health system who would obtain certification and then leave the position for a better paying job. Recruitment of dentists in New Mexico is difficult because of the lack of a dental school in the State.

*19a. What are the most pressing continuing education training needs for oral health staff?*

The most pressing training needs identified were CPR, infection control, fluoridation, and sealant techniques.

*19b. Are there sufficient training opportunities?*

In general, training on the topics identified were available.

*19c. Are there adequate resources to support training opportunities?*

Agency training funds was reported as the primary source of support for continuing education for oral health staff.

*20. How many (%) oral health staff are expected to retire in the next five years?*

There is general concern about the aging of dentists in New Mexico and the potential for shortage of dentists throughout the State within the next ten years. However, the retirement of oral health staff did not appear to be a pressing concern in New Mexico.

## **MPHs in Public Health**

21. *Do State, district, and county State health departments employ MPHs or encourage existing staff to obtain MPHs or other formal public health training?*

Survey respondents reported few staff with MPHs or other formal public health training in district and local health offices. While district directors reported a need for training their existing workforce in core public health concepts, they did not see an MPH as the only priority for advanced education for their workers.

22. *Is an MPH required for leadership positions in local, district, and State health departments? What roles do MPHs play in local and State health departments?*

While an MPH was a preference for a number of leadership positions in the public health system, it was not required. Staff with MPHs or other formal public health training were more likely to be found in the State central office than in district or local health offices. Responsibilities of staff with MPHs included bio-terrorism, epidemiology, program planning or program management and leadership.

23. *Do local, district, and State health departments experience difficulty recruiting or retaining MPHs?*

Given the fact that formal public health training was a preferred qualification for most positions, recruitment and retention issues were difficult to gauge. While district directors indicated a need for their existing workforce to pursue advanced education, including MPHs, they reported that available programs were not geared for people who worked.

## **Collaborations**

24. *Do local or State health departments have a relationship with a school of public health or an MPH program, a school of nursing, or a school of medicine/ dentistry or another relevant education program?*

Schools of nursing were most likely to have a relationship with district or local health offices. There did not appear to be linkages between the State's school of public health and the public health system at the district or local health office level.

25. *Does this relationship help meet the need for new staff, upgrade staff or address continuing education needs of its workers?*

District nursing directors reported limited opportunities for existing PHNs to complete baccalaureate nursing degrees. In addition, while there was general consensus on the importance of encouraging staff to pursue advanced education, there were few programs designed for people who work as well as ones that use technology such as distance learning to make programs accessible for workers in the more remote areas of the State.

## New York State Public Health Case Study Findings

New York had a 2000 population of nearly 19 million people, but grew substantially more slowly (6%) between 1990 and 2000 than the U.S. as a whole (13%). New York’s population is approximately 16% Black/African American, 15% Hispanic/Latino(a), and 6% Asian/Pacific Islander. Eighty-two percent of New York’s population live in metropolitan areas, although 13% live in rural areas. New York has a somewhat higher poverty rate than the U.S. as a whole (15% versus 12%).

### General

1. *Describe the PH system model in the State (relationship between State and local health departments).*

The New York State Department of Health (SDOH) and 58 local health departments (LHDs) have primary responsibility for public health services in New York State. The public health system is largely decentralized with fifty-seven county health departments and the New York City Department of Health and Mental Health operating under the administrative authority of local governments to provide the vast majority of public health services at the local level. New York’s public health system is viewed as a ‘mixed’ model with LHDs providing most of the core public health services and, in some instances, SDOH providing these services. Environmental health services is provided directly by 37 LHDs , while SDOH provides the service in the remaining 21 counties of the State.

**Table 21. Public Health Workers and Workers Per Capita in State and Local Health Departments, New York**

	PH Workforce	Per 100,000 Pop
<b>State</b>	5,430	29
<b>Local</b>	7,272	38
Local urban	4,992	30
Local rural	2,280	96
<b>Total</b>	<b>12,702</b>	<b>67</b>

In late 2001, in the face of increasing demands on the public health system, the Public Health Council, an advisory body to New York State Department of Health, appointed a Public Health Infrastructure Work Group to assess the public health system throughout the State and to make recommendations on how to strengthen the system. The Work Group’s goals were to understand the current workers, organizations and systems that comprise New York State’s public health infrastructure and evaluate its strengths and

weaknesses; to identify strategies to strengthen the capabilities of the public health system; and to make appropriate recommendations for improvement to the Public Health Council.

The Workgroup convened a *Work Force Subcommittee* to assess the supply, distribution, recruitment, retention, training and competencies of the public health workforce in local health departments. The ultimate goal was to understand the most compelling work force issues facing the local public health infrastructure in New York State (NYS) and make recommendations for ways to overcome barriers and facilitate higher performance. Given the substantial amount of overlap between the efforts of the Workforce Subcommittee of the NYS Public Health Council Work Group and the NYS Case Study, data collection for both were, for the most part, concurrent.

In November of 2003, the Public Health Council issued a report on their assessment of the public health infrastructure in New York State.<sup>18</sup>

## *2. Describe range of services provided at local and State level.*

SDOH administers a wide range of public health programs directly or under contract for disease prevention and control, environmental health protection, health promotion, and emergency preparedness and response. In addition, SDOH conducts health care surveillance in hospitals, home care agencies and nursing homes across the State; conducts public health research; manages the State Medicaid program as well as other health insurance programs for the uninsured; and operates five health care institutions.

All LHDs offer core public health services including community assessment, disease control and prevention, family health services, and health education; some offer environmental health services. In addition, LHDs provide a variety of other services:

- 47 local health departments operate certified home health agencies,
- 53 administer Early Intervention Programs,
- 32 operate well-child clinics,
- 30 operate comprehensive diagnostic and treatment clinics,
- 20 manage Women, Infant and Children (WIC) nutrition programs, and
- 10 oversee public health laboratories.<sup>19</sup>

Local health departments also serve as SDOH contractors for many of their programs, including Tobacco Control, Healthy Heart, and Lead Poisoning Prevention Programs.

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<sup>18</sup> New York State Department of Health, 2003.

<sup>19</sup> New York State Association of County Health Officers, 2003.

3. Describe the State and local PH offices included in the field work.

Six LHDs were surveyed in the case study; the majority of them (5 of 6) were also part of the study conducted by the Workforce Subcommittee of the Public Health Infrastructure Work Group that was appointed by the NYS Public Health Council. The six LHDs surveyed for the case study represented urban, suburban and rural counties across the State.

The basic public health services provided by these LHDs are summarized below:

**Table 22. Services Provided by Six Local Public Health Departments in New York**

Services Provided by Six Local Public Health Departments in NYS						
	Downstate Urban	Downstate Urban	Upstate Urban	Upstate Urban	Rural	Rural
Adult Immunizations	X	X	X	X	X	X
Bioterrorism	X	X	X	X	X	X
Case Management						
Child Health	X	X	X	X	X	X
Communicable Disease Control	X	X	X	X	X	X
Community Assessment	X	X	X	X	X	X
Community Outreach and Education	X	X	X	X	X	X
Epidemiology and Surveillance	X	X	X	X	X	X
Health Education/Risk Reduction	X	X	X	X	X	X
HIV/AIDS Testing and Counseling	X	X	X	X	X	X
HIV/AIDS Treatment	X	X				
Laboratory Services	X	X	X			
Tobacco Prevention		X	X	X	X	
Tuberculosis Testing	X	X	X	X	X	X
Tuberculosis Treatment	X	X	X	X	X	X
Dental Health	X	X	X	X	X	X
Environmental Health	X	X	X	X	X	
Inspections and/or Licensing	X	X	X	X	X	
Maternal Health Programs	X	X	X	X	X	
STD Testing and Counseling	X	X	X	X	X	X
STD Treatment	X	X	X	X	X	X
Violence Prevention	X					
Animal Control	X					
Chronic Disease Control	X	X	X	X	X	X
Behavioral/Mental Health	X					
Family Planning	X	X	X			X
Injury Control	X	X	X	X	X	X
Occupational Safety and Health						
School Health	X					
Screening and Treating the Homeless						

Home Health Care		X		X	X	X
Prenatal Care	X	X	X	X	X	X
Primary Care (Comprehensive)	X	X		X		X
School Based Clinics	X					
Substance Abuse Services	X					
Veterinarian Public Health Activities	X	X	X	X	X	X
Obstetrical Care						

*4a. What are the most pressing recruitment and retention problems facing the PH offices studied?*

Most of the LHDs surveyed reported difficulty recruiting public health nurses, public health sanitarians and public health educators. Other workers identified by some of the LHDs as posing recruitment difficulties included nutritionists/dieticians, social workers, clerical staff, occupational therapists, physical therapists, speech-language pathologists and home health aides.

When asked about the recruitment and retention of staff to provide epidemiology services, the LHDs surveyed reported a variety of strategies to address this need: the larger LHDs had epidemiologists on staff and reported success with National recruitment efforts. The smaller LHDs reported recruiting staff from other professions, such as registered nursing and providing them with additional training in epidemiology. The rural LHDs reported success using either State DOH regional epidemiology resources or those provided via a regional bioterrorism/epidemiology pilot project.<sup>20</sup>

While the LHDs surveyed reported good retention of their workforce, many were concerned about the aging of their workforce and anticipate an increasing number of retirements of senior staff.

*4b. Do State and local health departments encounter difficulty recruiting or retaining RNs, physicians, dentists or MPHs?*

Most of the LHDs surveyed reported difficulty recruiting public health nurses. The rural LHDs had more difficulty finding qualified candidates and reported success in developing career ladders for public health nurses. These LHDs recruited RNs who worked in their home health agencies while pursuing advanced education in order to qualify as public health nurses.

Rural LHDs reported more difficulty recruiting physicians than urban LHDs. Physicians in the urban LHDs surveyed filled both administrative and clinical roles, while the rural LHDs were more likely to contract with physicians to serve as clinical consultants. Physicians in urban LHDs were more likely to have formal public health training than the physicians working in rural LHDs. Urban LHDs tended to recruit physicians either

<sup>20</sup> Two regional bioterrorism/epidemiology pilot projects were funded through the Centers for Disease Control Bioterrorism Grant to New York State. Fifteen upState counties participate in these collaborations.

regionally or nationally and reported less difficulty finding qualified candidates to fill positions. Rural LHDs, on the other hand, tended to have more difficulty recruiting physicians, attributed to the small pool of available candidates within their local labor market.

Both urban and rural LHDs reported small oral health programs that emphasized prevention and education and did not identify any substantial recruitment or retention issues for oral health staff, including dentists.

The larger LHDs surveyed were more likely to have executive staff with formal public health training and were more likely to employ staff with formal public health training, often working in program administration. The leaders of rural LHDs had post-graduate education, but it was less likely to be in public health and while they encouraged their staff to pursue advanced education, lack of access to formal public health education programs limited their options.

5. *Which of the following factors has the most significant impact on the recruitment and retention of PH workers at State and local health departments?*

- Budget constraints
- Lack of qualified candidates
- Non-competitive salaries
- Need for continuing professional education

Budget constraints were identified as the most significant barrier to adequate staffing; non-competitive salaries and lengthy processing time for new hires also contributed to the problem. Finding qualified candidates was more likely to be identified as a recruitment barrier for rural LHDs.

Some LHDs indicated that the minimum qualifications for public health educators in the New York State Sanitary Code were too narrow to enable them to recruit needed candidates for these positions. In some instances, LHDs facing hiring difficulties for public health educators reported using staff in other titles to perform health education functions.

6. *How do staffing patterns and workforce needs at State and local health departments vary based on rural or urban location?*

It was estimated that in 2002 there were more than 12,600 full-time equivalent (FTE) public health workers employed by SDOH and LHDs in New York State.<sup>21</sup> Of the total, nearly 58% worked in LHDs across the State while the remainder worked for SDOH. A

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<sup>21</sup> Based on data provided by the New York State Department of Health and a 2000-2001 survey of local health departments in New York State conducted by Peggy DiManno, Sylvia Pirani, Dwight Williams and Carol Young as part of a Public Health Leadership Institute Project.

more in-depth description of the size and composition of the LHD workforce is presented below.<sup>22</sup>

There were approximately 7,270 FTE public health workers employed at LHDs across the State in 2002 and nearly 69% of them worked in urban LHDs. However, there were more public health workers per capita<sup>23</sup> in rural LHDs<sup>24</sup> than in urban ones:

- There were nearly 5,000 FTE public health workers employed by urban LHDs or 35.6 FTEs per 100,000 population.
- There were over 2,275 FTE public health workers employed by rural LHDs or 76.2 FTEs per 100,000 population.

LHDs reported over 70 occupational titles (Appendix I) in their workforce with some variation between urban and rural LHDs. This may reflect differences in the scope of services provided by these LHDs.

- While nurses represented 22% of the total LHD workforce in 2002, they accounted for 42% of FTEs in rural LHDs, but only 14% of FTEs in urban LHDs.
- Scientific/investigative staff comprised 20% of the total LHD workforce in 2002. This included environmental health staff (i.e., engineers, sanitarians, and environmental technicians) who alone represented 15% of the total public health workforce. Note: No environmental health staff were employed by the LHDs in the 21 counties where environmental health services is provided by SDOH.
- Epidemiologists, communicable disease staff and disease control investigators represented 5% of the total LHD work force in 2002.
- Education/outreach staff comprised 10% of the total LHD workforce in 2002, while health educators who were included in this category were only 2% of the total LHD work force.
- Physicians<sup>25</sup> comprised 1% of the total LHD workforce in 2002.
- Support personnel, including program aides, public health assistants and support staff, comprised nearly 28% of the total LHD workforce in 2002.

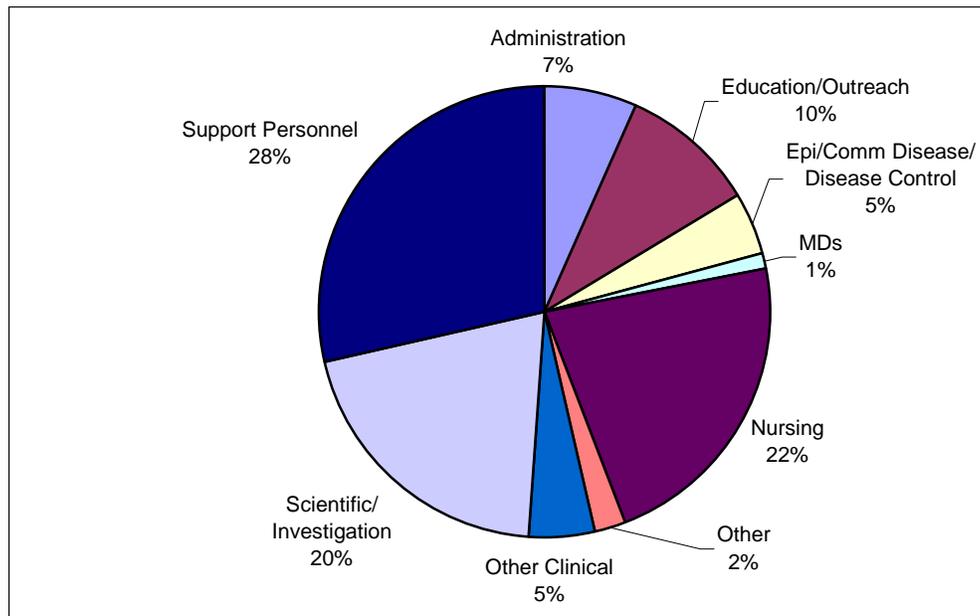
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<sup>22</sup> Based on results of LHD survey cited above. Surveys were received from 54 of 58 LHDs, for a response rate of over 93%. Staff working exclusively for Early Intervention Programs or in Certified Home Health Agencies were not included in the enumeration.

<sup>23</sup> Total FTEs and per capita calculations reflect only those counties that responded to the survey. No adjustment was made for non-respondents.

<sup>24</sup> Using the definition in NYS Public Health Law (a county with a total population of less than 200,000 is considered rural), there are 19 urban counties and 43 rural counties in New York State.

<sup>25</sup> Includes physicians in clinical titles only.



**Figure 4. Detailed Occupation Distribution of Public Health Workers, New York**

There was some variation between the responses of urban and rural LHDs on recruitment and retention issues they faced. The rural LHDs tended to draw their staff from their local labor market. When demand for a profession exceeded supply locally, these LHDs encountered recruitment difficulties. The urban LHDs recruited for some positions (particularly higher level jobs) from the National labor market and in general reported less difficulty finding qualified candidates to fill their positions.

## **Public Health Nurses**

*7. Describe the Public Health Nurse (PHN) workforce, including qualifications, formal public health training requirements, and roles.*

The qualifications and training requirements for public health nurses is defined in NYS Sanitary Code State regulations that are followed by State and county health departments in NYS. Public health nurses must have a baccalaureate degree in nursing from an accredited nursing program and a license to practice nursing in New York State. A supervising public health nurse must meet the minimum requirements plus two years experience as a PHN or a masters' degree in nursing plus one year of experience as a PHN. The LHDs surveyed described PHN roles in direct patient services, population-based services and program management.

In addition to PHNs, some LHDs use other nursing titles, including Community Health Nurses (CHNs) for their home health agencies. There are no minimum educational qualifications for CHNs, i.e., a baccalaureate degree in nursing is not required.

The percent of the LHD nursing workforce that were PHNs ranged from 40-55%.

*8a. Do State and local health departments encounter difficulty recruiting or retaining PHNs?*

Half of the LHDs surveyed indicated they didn't have enough PHNs to provide needed services in their counties. Two of the larger urban LHDs reported less difficulty recruiting PHNs than the rural LHDs surveyed. Vacancy rates for PHNs ranged from a high of 50% to a low of 0%. Some LHDs reported losing vacant positions due to budget cuts.

The LHDs surveyed expressed little concern about PHN retention, reporting a very stable workforce with little turnover. All reported a core staff of PHNs with many years of experience.

*8b. If so, why?*

The reasons cited for PHN recruitment difficulty included budget constraints, lack of qualified candidates in a geographic area, and non-competitive pay.

*8c. How does it impact PHN hiring, roles, services?*

Many LHDs reported 'continuous recruitment' of PHNs, i.e., recruiting even when there are no vacancies in order to have a list of qualified applicants when vacancies arise. In some instances, the PHN workforce in rural LHDs was stable (and usually small) and CHNs were harder to recruit because there was more competition from local hospitals. In other instances, the LHD recruited CHNs and supported their efforts to obtain a BSN so they could move into a PHN position. For smaller, rural LHDs, this strategy has created a career ladder in nursing and stabilized their nursing workforce.

*9a. What are the most pressing continuing education training needs for PHNs?*

The LHDs surveyed reported PHN training needs in the following areas:

- **Core public health concepts**, including topics such as policy development and program planning; population-based care; community assessment; risk communication and legal aspects of public health.
- **Clinical topics**, including emerging infectious diseases; high-risk pregnancy; and teen pregnancy.
- **Supervisor/manager training**, including effective communication and progressive discipline.

Other training topics included information technology, diversity and cultural competence.

*9b. Are there sufficient training opportunities?*

According to survey respondents, it was easier to find training on clinical topics or supervisory training because such training drew a broader audience. It was harder to find training opportunities on core public health topics for PHNs.

*9c. Are there adequate resources to support training opportunities?*

While some training opportunities may be available, resources are a major constraint. Some collective bargaining money is available and some LHDs report small agency training budgets (which are the first to be cut when county budget problems occur); others report using grant funds to provide specific training tied to grant activities.

*10. How many (%) PHNs expected to retire in the next five years?*

There were a wide range of responses to this question – two LHDs expected a few retirements, two expected some, one anticipated many, and one LHD reported that PHN retirements had already happened.

One of the LHDs surveyed expected to lose half of their PHNs to retirement incentives that will be available in the next few years and the resulting vacant PHN positions would be abolished due to county budget constraints. While this workforce reduction would clearly impact on public health service delivery, no final decisions had been made on what services would be cut.

## **Public Health Physicians**

*11. Describe the physician workforce in public health, including qualifications, formal public health training requirements, and roles.*

The urban LHDs surveyed were more likely to employ physicians for both administrative and clinical roles. The number of FTE physicians employed at urban LHDs ranged from 2.5 to 22 FTEs. Many were employed part-time. Specialties of these physicians included preventive medicine, internal medicine, infectious diseases, pulmonology, pediatrics, and family practice. In general, urban LHDs indicated that formal public health training was important for the physicians who worked for them; half or more of physicians in these LHDs had formal public health training.

Rural LHDs reported contracting with local physicians on a part-time basis to serve as clinical consultants. These physicians did not have formal public health training and while viewed as important, rural LHDs indicated that physicians with formal public health training simply weren't available.

*12. Do State and local health departments encounter difficulty recruiting or retaining physicians for PH jobs?*

Half of the LHDs surveyed indicated an insufficient number of public health physicians to provide needed services in their counties, attributed to budget constraints. Urban LHDs

reported less difficulty finding qualified candidates to fill vacancies, while rural LHDs indicated that recruitment can be very challenging, given the limited candidate pool. One rural LHD indicated that their Medical Consultant is expected to retire soon and it is unclear if there are any local physicians available to replace him. Retention did not appear to pose a problem for either urban or rural LHDs.

One strategy that proved successful in meeting the need for epidemiology services was a regional epidemiology collaborative. A group of contiguous counties shared the services of an epidemiologist who was based in the largest LHD of the group, but available to provide technical assistance to any of the participating counties on an as needed basis. Two of the LHDs surveyed participated in this collaborative and reported it to be very useful in meeting their need for an epidemiologist.

*13. What are the most pressing continuing education training needs for physicians in public health jobs?*

Increased efforts to provide timely information on emerging infectious diseases (NYSDOH and Schools of Public Health in New York State) has helped to address significant need for up-to-date clinical information.

*14. Are there sufficient training opportunities?*

Use of teleconferencing or broadcast training on clinical topics in public health has improved access to needed training for public health physicians.

*15. Are there adequate resources to support training opportunities?*

LHDs reported diminishing agency resources to support training/continuing education. Grant funding is used to support training in the specific area of grant funding.

*16. How many (%) physicians in public health jobs expected to retire in the next five years?*

This did not appear to be a pressing issue for most of the LHDs surveyed. However, as indicated previously, rural LHDs concerned about physician retirement reported more difficulty finding qualified candidates to fill vacancies for public health physicians.

## **The Oral Health Workforce in Public Health**

*17. Describe the oral health workforce in public health, including qualifications, formal public health training requirements, and roles.*

The LHDs surveyed reported small oral health programs that were focused on prevention, screening and education. Oral health staff included a small number of dentists, dental hygienists and dental assistants. While LHDs surveyed generally felt that formal public health training was somewhat important for their oral health staff, it was not a requirement.

The roles of oral health staff that were most consistently reported by the LHDs surveyed included health education, outreach, screening, health education program development, and coalition building. One LHD reported a collaboration with a local community health center to provide both prevention and treatment services.

At the State level, the Dental Director and Assistant Dental Director at SDOH are both board certified in dental public health and oversee a dental public health residency program. The Assistant Dental Director noted that community health centers (CHCs) in New York State are playing an increasingly strong role in improving access to oral health services. Diminishing local resources have reduced or eliminated many local programs operated by LHDs. Federal funding of oral health programs for community health centers has expanded their capacity to provide oral health services to the indigent. Consequently, Dental Directors at CHCs may benefit from exposure to PH concepts, particularly in the areas of community assessment and advocacy.

*18. Do State and local health departments encounter difficulty recruiting or retaining oral health workers?*

Two of the LHDs surveyed reported facing significant reductions in local funding for their oral health programs. In both instances, the funding cuts could result in either a reduction in services or the elimination of the program.

Few vacancies for oral health staff were reported and when there were vacancies, they were attributed to budget constraints.

*19a. What are the most pressing continuing education training needs for oral health staff?*

The LHDs surveyed reported the following clinical training needs for oral health staff: infection control; oral health during pregnancy; child development and behavior; child abuse; tobacco cessation/oral cancer; and pharmacology and therapeutics.

*19b. Are there sufficient training opportunities?*

According to survey respondents, there was better access to training for oral health staff in urban LHDs than those in rural LHDs.

*19c. Are there adequate resources to support training opportunities?*

LHDs reported using collective bargaining money to support training. County workers are unionized, and training and tuition reimbursement is a negotiated benefit. In addition, some reported small agency training budgets or providing in-service training on some topics (depending on the size of the agency). In some instances, grant funds were used to provide specific training tied to grant activities.

## **MPHs in Public Health**

*20. Do local and State health departments employ MPHs or encourage existing staff to obtain MPHs or other formal public health training?*

The urban LHDs reported some staff with MPHs and indicated that this credential was important for some, but not all positions. While rural LHDs reported no staff with MPHs, they emphasized the importance of advanced education for their program directors; they were not convinced of the value of an MPH to a small agency.

*21. What roles do MPHs play in local and State health departments?*

LHDs that employ MPHs reported that their roles included program administration, executive management, disease control and in some instances, clinical services.

*22. Is an MPH required for leadership positions in local and State health departments?*

New York State Commissioners of twelve LHDs in counties with a population of more than 250,000 are required to be physicians with MPHs (or a related field) and three years of public health experience (or an appropriate combination of training and experience). The Commissioner of SDOH is also required to be a physician with formal public health training.

*23. Do local and State health departments experience difficulty recruiting or retaining MPHs?*

Given the limited demand, issues related to the recruitment or retention of MPHs were difficult to assess.

## **Collaborations**

*24. Do local or State health departments have a relationship with a school of public health or an MPH program, a school of nursing, or a school of medicine/ dentistry or another relevant education program?*

The LHDs surveyed reported relationships with colleges and universities in their communities, both for training and recruitment. Not all LHDs surveyed reported relationships with a School of Public Health (SPH). While those LHDs furthest from a SPH were unlikely to have a relationship with one, proximity did not always guarantee a relationship between a SPH and a LHD.

*25. Does this relationship help meet the need for new staff, upgrade staff or address continuing education needs of its workers?*

The LHDs surveyed generally agreed on the importance of encouraging their staff to pursue advanced training and take advantage of opportunities for continuing education. However, they emphasized that programs must be designed for people who work and use

technology such as distance learning to make it viable for people who don't live near the educational institution.

## Texas Public Health Case Study Findings

Texas now has a population greater than 20 million and in 2000 was the second most populous State after California. Population growth in Texas between 1990 and 2000 exceeds the National average (23% versus 13%). The population of Texas is distributed unevenly with two-thirds of residents living in the eastern third of the State. Much of the western third of the State is rural and sparsely populated, with a number of frontier counties. Overall, seventy-one percent of Texans live in urban areas, while 17% live in rural areas. Thirty-two percent of Texans are Hispanic/Latino(a), while 12% are Black/African American and 3% are Asian/Pacific Islander. Texas has a somewhat higher poverty rate than the U.S. as a whole (15% versus 12%).<sup>26</sup>

### General

1. *Describe the PH system model in the State (relationship between State and local health departments).*

Public health is centralized in Texas and Statewide policy-making comes out of the Texas Department of Health (TDH). To help administer health policies and procedures, the State is divided into eight regions, each with a Regional Director and complimentary staff to that of the State central office staff. In addition, there are a number of local health departments that are comprised either of a county, city and county, two or three counties together, or some other general geographic area. By far, more counties in Texas do not have a local health department than do, and in those cases, at present, the responsibility for public health services in those counties falls to the TDH public health regional office serving those counties.

Until September 1, 2003, the Texas Department of Health was a 'stand-alone' State agency. A major piece of legislation that passed during the last regular session of the Texas legislature was a law that consolidated State agencies, reducing the number of health and human service agencies from 11 or 12 down to 5. TDH, for all intents and purposes, will be dissolved, and during a five-year phase-in period, will be combined with these other entities: the agency that oversees mental health services; the Texas Health Care Information Council (THCIC) which is responsible for hospital patient discharge information; and the Texas Commission on Alcohol and Drug Abuse. This newly created umbrella agency will report to the Health and Human Services Commission which reports directly to the Governor.

2. *Describe range of services provided at local and State level.*

The Texas Department of Health provides a broad range of services and is committed to the core functions of public health (see appendix for services list). There is no legislative mandate requiring that local governmental health departments provide services, so that counties, cities, and other local governmental entities may opt out of providing services completely. Local governments have the option to create a local health department and

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<sup>26</sup> U.S. Bureau of the Census, 2000.

assume certain responsibilities and duties. Since there is no mandate for local government to provide local public health services, there is wide variation in the services provided. The range of services provided by a local health department is partially influenced by the amount of direct patient care they provide.

**Table 23. Services Directly Provided or Supported through Contract Funds, Texas Department of Health**

Public Health Service	Provider		
	Both	TDH-Austin	TDH-Region
Adult Immunizations			√
Animal Control			√
Behavioral/Mental Health			
Bio-Terrorism			√
Case Management			√
Child Health			√
Childhood Immunizations			√
Chronic Disease Control			√
Community Disease Control			√
Community Assessment			√
Community Development			√
Community Outreach and Education			√
Dental Health			√
Environmental Health			√
Epidemiology and Surveillance			√
Family Planning			√
HIV/AIDS Testing and Counseling			√
HIV/AIDS Treatment	√		
Health Education/Risk Reduction			√
Home Health Care	√		
Injury Control			√
Inspections and/or Licensing (Health Professions)			
Laboratory Services			√
Maternal Health Programs			√
Obstetrical Care			√
Occupational Safety & Health	√		
Prenatal Care			√
Primary Care (Comprehensive)			√
Programs for Screening and Treating Homeless			
School-Based Clinics			√
School Health			√
STD Testing and Counseling			√
STD Treatment			√
Substance Abuse Services			
Tobacco Prevention			√
Tuberculosis Testing			√
Tuberculosis Treatment	√		
Veterinarian Public Health Activities			
Violence Prevention			√
Policy & Standards Development	√		
Quality Assurance	√		

3. *Describe the State and local PH offices included in the fieldwork. (#, size, location, urban/rural, border and workforce composition)*

The public health departments that were part of this case study included TDH and five local health departments. These local health departments included a large metropolitan city health department, a smaller metropolitan health department on the Texas/Mexico border, a city/county health department in the Texas Panhandle, a city/county health department in Northeast Texas and one rural county health department in East Texas that served 2 counties. TDH is the agency responsible for many programs and services throughout the State of Texas and in the places where there are no local health agencies serving as the de facto health department. There are a few sub-regional offices that serve as regional office extensions, usually located in small, isolated cities within their regions. TDH is the largest public health provider in Texas with the largest number of public health employees. In 2003, the TDH workforce included 344 nurses and physicians plus many other workers in support positions.

4a. *What are the most pressing recruitment and retention problems facing the PH offices studied?*

4b. *Do State and local health departments encounter difficulty recruiting or retaining RNs, physicians, dentists or MPHs?*

The most pressing recruitment and retention problems facing the health departments included in the case study concerned nurses. The border health also had difficulty finding physicians and dentists due to the remoteness of their location. The eastern rural health department also reported difficulty hiring social workers. The northeast agency reported difficulty recruiting medical technologists. The TDH experienced a budget reduction and has offered early retirement incentives in order to reduce staff. This downsizing will likely impact on public health staffing and services. When asked about need for MPHs, local health departments generally considered MPHs to be a valuable asset when they had a clinical background. TDH considered MPHs to be a very important asset (the State Commissioner of Health typically has formal public health training), but only a limited number of TDH staff have MPHs.

5. *Which of the following has the most significant impact on the recruitment and retention of PH workers at State and local health departments?*

- Budget constraints
- Lack of qualified candidates
- Non-competitive salaries
- Need for continuing professional education

Budget constraints, which have led to hiring freezes and cutbacks, have had the most significant impact on the recruitment and retention of public health workers, especially nurses. The majority of health departments in the study reported that the number of

funded positions for public health nurses was inadequate. Budget constraints prevented agencies from offering competitive salaries, especially during a nursing shortage when hospitals offered nurses large sign-on bonuses. Qualified candidates often did not consider employment with these agencies. When acceptable candidates were successfully hired they often obtained needed continuing education via a number of different programs including TDH and schools of public health.

6. *How do staffing patterns and workforce needs at State and local health departments vary based on rural, urban location or proximity to a US border?*

Staffing patterns differed more by services offered by a health department than by their location. Overall, the health departments included in the study reported financial difficulties. The Panhandle located agency that was no longer involved in direct patient care had no need for a large staff and had about the same number of FTEs as the small rural bi-county east Texas health department, which provided indigent care, but to a much smaller population. TDH did not directly offer any dental services and so had no dentists, but did have an office for a State dental director. The border health department did have a dental care program but had trouble retaining dentists (as well as other staff) not so much due to their proximity to the border, but rather to the remoteness of their location. This was similar to the rural east Texas health department on the opposite side of the State. The limitations in recruitment and retention of staff caused by location are worsened in both cases by inadequate budgets leading to non-competitive salaries.

### **Public Health Nurses (PHNs)**

7. *Describe the PHN workforce, including qualifications, formal public health training requirements, and roles.*

Qualifications vary for nurses, with licensed vocational nurses deemed as acceptable for smaller health departments and registered nurses for larger health departments or for administrative positions. PHNs were not required to have any formal public health training.

8a. *Do State and local health departments encounter difficulty recruiting or retaining PHNs?*

Respondents indicated that PHNs were difficult to recruit and retain. PHNs who worked in these health departments stayed because they preferred a weekday 9 to 5 job without overtime or emergency calls. Even so, the northeast Texas health department reported losing some of their PHNs to other employers who offered \$10,000 increases in pay. The agency located on the border with Mexico had two nurse training programs in their area, but none of the graduates applied to work for them. Rather, the RN graduates chose to relocate away from this remote and isolated area to the larger metropolitan areas, like San Antonio or Houston and they were likely to already have a job in these areas by the time they graduated.

*8b. If so, why?*

Salaries were not competitive in public health, even though the working conditions tended to be more attractive than hospital shift work. Many of the health departments were located in remote rural or border areas with fewer amenities, and many younger nurses preferred to locate in the larger cities.

*8c. How does it impact PHN hiring, roles, services?*

The lack of PHNs meant that programs were either understaffed or implementation was delayed. For example, the immunization program at the health department in central Texas was behind schedule due to the shortage of PHNs. In east Texas, programs were reduced rather than expanded to meet growing need because of budget shortfalls that made salaries less competitive and less attractive to registered nurses in the area. Competition with and between hospitals for nurses in Texas was intense, with nurses being offered lucrative sign-on bonuses. Local health departments could not compete with such offers.

*9a. What are the most pressing continuing education training needs for PHNs?*

- Clinical topics
- Managerial/administrative training
- Epidemiological/surveillance

*9b. Are there sufficient training opportunities?*

There were several training programs available to assist and support the needs of local health departments. Many of these programs came from TDH and from the health science centers. Some were downlinks or webcasts. The local health department located on the border with Mexico reported insufficient training resources for most educational needs.

*9c. Are there adequate resources to support training opportunities?*

There was usually some agency funding and, in some instances, grants were used to support training.

*10. How many (%) PHNs are expected to retire in the next five years?*

At TDH, 36% of its PHN workforce is expected to retire in the next five years, due in part to an early retirement incentive. A much smaller percentage of PHNs are expected to retire at the local agencies (range 0 to 12%).

## **Public Health Physicians**

*11. Describe the physician workforce in public health, including qualifications, formal public health training requirements, and roles.*

Most physicians in public health were involved in direct patient care and/or in health agency administration/management. The physician director's responsibilities in the smallest local health department included in the case study were strictly administrative. In most local health departments, physicians were required to have no more than a license to practice medicine. Physicians sometimes held director positions, but not always. In the border LHD there was a move to require that physicians who worked there have some type of public health training. In some instances, the only physicians with formal public health training in local health departments were the directors. In the local health department in northeast Texas, physicians only provided patient care services and were 'shielded' to a large extent from administrative duties.

*12a. Do State and local health departments encounter difficulty recruiting or retaining physicians for PH jobs?*

Both State and local health departments reported difficulty recruiting and sometimes retaining physicians. One director reported that it took over a year to fill a deputy director position in the local health department on the border. The central Texas local health department reported utilizing retired physicians from the local area for part-time help.

*12b. If so, why?*

Salaries were lower in public health agencies than in other health care settings, so there tended to be fewer applicants for vacant positions. Also, some local health departments were located in remote rural parts of the State that were not attractive.

*12c. How does it impact on physician hiring, roles, services?*

A few of the local health departments reported that the number of physicians on staff was adequate, while others reported the number to be inadequate. Difficulty hiring physicians caused local health departments to be short-handed and prevented expansion of programs in response to increasing needs.

*13a. What are the most pressing continuing education training needs for physicians in public health jobs?*

Some agencies reported the need for training on clinical topics, (chronic disease management, occupational & environmental health), while others reported a need for public health training including surveillance and emergency-preparedness. Training in organizational management and policy development were also identified as needed.

*13b. Are there sufficient training opportunities?*

Most agencies reported sufficient training opportunities, much of which comes from TDH. The agency on the U.S./Mexico border reported that there were not sufficient training opportunities for all of their educational needs.

*13c. Are there adequate resources to support training opportunities?*

Most agencies had some funding and also used grants to help support continuing education. The agency on the panhandle reported paying tuition and the cost of books for their physician who was enrolled in a distance learning MPH program.

*14. How many (%) physicians in public health jobs are expected to retire in the next five years?*

Only 5% of the local health department physicians were expected to retire in the next five years and this was not viewed as much of a concern. .

## **The Oral Health Workforce in Public Health**

*15. Describe the oral health workforce in public health, including qualifications, formal public health training requirements, and roles.*

Only two of the five local health departments reported directly employing dentists (four dentists in all) and while TDH has a State Dental Director Office, they did not report employing a practicing dentist. The local health department on the border wanted to hire a dentist, but had trouble retaining one and used a contract dentist instead. This agency also had physicians and nurses involved in a comprehensive pediatric dental care program, along with a contract dentist and dental assistant. The local health department in northeast Texas utilized volunteer dentists and had recently been able to hire one directly. Dentists in the local health departments were most likely providing direct patient services with the support of a few dental hygienists and dental assistants. Qualifications were minimal and the local health department in central Texas was the only one of the agencies surveyed who reported having a dentist with an MPH.

*16a. Do State and local health departments encounter difficulty recruiting or retaining oral health workers?*

The local health departments reported difficulty recruiting and retaining dentists. The agency on the border in particular indicated difficulties in keeping a dentist and the agency in central Texas employed retired military dentists part-time to staff their programs.

*16b. If so, why?*

Budget constraints, non-competitive salaries, and remote locations seemed to be the major reasons identified for the difficulty in recruiting and retaining dentists.

*16c. How does it impact hiring, roles, services?*

Existing and needed programs could not be expanded, if dentists could not be recruited or retained.

*17a. What are the most pressing continuing education training needs for oral health staff?*

Continuing education training needs for dentists included topics such as emergency, restorative, periodontics and preventative dental care. Public health, administrative skills and emergency-preparedness were also mentioned as training needs.

*17b. Are there sufficient training opportunities?*

Local health departments reported training opportunities for dentists were sufficient.

*17c. Are there adequate resources to support training opportunities?*

There were not adequate resources to support continuing education for dentists in all agencies surveyed. Two agencies had some funds to support training. The agency on the border reported their dentist paid his own training expenses.

*18. How many (%) oral health staff are expected to retire in the next five years?*

One of the four (25%) currently employed dentists is expected to retire during the next five years (one of the three in Central Texas).

## **MPHs in Public Health**

*19. Do local and State health departments employ MPHs or encourage existing staff to obtain MPHs or other formal public health training?*

The local health departments and TDH preferred to employ MPHs and encouraged their existing staff to obtain MPHs or other formal public health training, especially those in clinical titles. Respondents indicated that people with MPHs without a clinical background were of little value to them.

*20. What roles do MPHs play in local and State health departments?*

MPHs often had management and administrative duties as well as patient care responsibilities. At the TDH an MPH was considered desirable. At the local health border agency, an MPH was considered a prerequisite for program management. The local health department in central Texas claimed to grow their own administrators (in-house) and did not expect to easily recruit or successfully retain clinicians with MPHs, indicating that either TDH or CDC would offer better opportunities and lure them away.

*21. Is an MPH required for leadership positions in local and State health departments?*

TDH does not require an MPH for leadership positions though many program directors had MPHs and the Commissioner was expected to have an MPH or doctoral level public health degree. The border health department has begun to require that all director-level physicians have an MPH.

*22. Do local and State health departments experience difficulty recruiting or retaining MPHs?*

Local health departments reported difficulty recruiting and retaining clinicians with MPHs. TDH reported losing their staff with MPHs to private interests, academia and CDC.

## **Collaborations**

*23. Do local or State health departments have a relationship with a school of public health or an MPH program, a school of nursing, or a school of medicine/ dentistry or another relevant education program?*

Yes. A number of collaborations were reported by local health departments and TDH, including internship sites for students in public health, nursing, dental hygiene and medicine.

*24. Does this relationship help meet the need for new staff, upgrade staff or address continuing education needs of its workers?*

Local health departments and TDH characterized these collaborations with educational institutions as a win/win situation.

## **Comments**

The agencies reported that they spend a significant amount of their administrative time and effort writing grants and otherwise searching for other external sources of funding.

Most local agencies, rather than reduce their roles in providing primary care, wanted to expand these services whenever it was financially possible.

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## **Appendix A**

### **Project Advisory Committee Membership**

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